

Report of the Surgeon General's Workshop on
PORNOGRAPHY and PUBLIC HEALTH

June 22-24, 1986
Arlington, Virginia

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Edward Donnerstein	



DEPARTMENT OF HEALTH & HUMAN SERVICES

The Surgeon General of the
Public Health Service
Washington DC 20201

August 1, 1986

The Hon. Edwin Meese, III
Attorney General
U.S. Department of Justice
Constitution Avenue and 10th Street, NW
Washington, D.C. 20530

Dear Mr. Attorney General:

I am pleased to transmit to you the report of the "Surgeon General's Workshop on Pornography and Public Health," which was held in Arlington, Virginia, on June 22-24. The Workshop and this report are in response to a request from the Chair, Mr. Henry E. Hudson, and the Members of the Attorney General's Commission on Pornography that the U.S. Public Health Service provide information to the Commission on the possible effects pornography may have upon public health. I hope the enclosed report is helpful to the work of your Department.

May I add that we were extremely fortunate to have had participants at the Workshop, each of whom demonstrated throughout the intensive day and evening sessions an extraordinary degree of interest, knowledge, and collegiality. They deserve great credit and the sincere thanks of their government. In addition, a great many persons from both our Departments contributed to the planning and the ultimate success of this Workshop; however, I would like to give special acknowledgment to the following:

Jo Ann Gasper, Deputy Assistant Secretary for Population Affairs, OASH
Saleem Shah, PhD, Chief of the Antisocial and Violent Behavior Branch, National Institute of Mental Health, ADAMHA;
David Heppel, MD, Chief, Child/Adolescent Primary Care Services Branch, Division of Maternal and Child Health, HRSA;
Theodore O. Cron, Special Assistant to the Assistant Secretary for Health and the Surgeon General, OASH;
Stephanie J. Stein, Special Assistant to the Surgeon General, OASH;
Jacqueline Friedewalde, proprietor of Conference Management Associates.

If the U.S. Public Health can be of any further assistance to the work of the Department of Justice in this or other matters, please let me know.

Sincerely yours,

A handwritten signature in black ink, appearing to read "C. Everett Koop".

C. Everett Koop, MD, DSc
Surgeon General

Enclosure



POLYCHLOROPHEN

AND PUBLIC HEALTH

SURGEON GENERAL'S WORKSHOP
JUNE 22, 23, 24, 1986
ARLINGTON, VIRGINIA

The Surgeon General's Workshop on Pornography and Public Health

June 22-23-24, 1986
Stouffer Concourse Hotel
Arlington, Virginia

A G E N D A

Workshop Chairperson: Alberto Serrano, MD
Director, Philadelphia Child Guidance Clinic
Professor, Child Psychology, University of Pennsylvania

Sunday, June 22, 1986

3:00 PM REGISTRATION (Plaza level)
6:00 PM RECEPTION, Cash bar (Dewey I, Plaza level)
7:00 PM DINNER (Dewey I, Plaza level)

- Keynote and "Charge to the Participants"
C. Everett Koop, MD
Surgeon General
U.S. Public Health Service
- "Psychological Research and Public Policy: Taking a Long, Hard Look Before We Leap"
Authors: Don Byrne, PhD
 Professor & Chairman, Department of Psychology
 State University of New York at Albany
 Kathryn Kelley, PhD
 Associate Professor, Department of Psychology
 State University of New York at Albany
- Discussant:* Jon R. Conte, PhD
 Assistant Professor
 School of Social Service Administration
 University of Chicago

Monday, June 23, 1986

7:30 AM BREAKFAST (Dewey I, Plaza level)

- "Remarks"
Henry Hudson
Chairman
Attorney General's Commission on Pornography

Monday, June 23, 1986, (Cont'd)

9:00 AM OPENING PLENARY SESSION (James Room, Lobby level)
• "Effects of Prolonged Consumption of Pornography"
Author: Dolf Zillman, PhD, Professor
Institute for Communications Research, Indiana Univ
Discussant: Albert Bandura, PhD
David Starr Jordan Professor of Social Science in
Psychology
Stanford University

10:30 AM COFFEE BREAK

10:45 AM RECONVENE PLENARY SESSION (James Room, Lobby Level)
• "Do Sexually Violent Media Indirectly Contribute to Antisocial
Behavior?"
Author: Neil M. Malamuth, PhD
Chairman, Communications Studies
University of California at Los Angeles
Discussant: Carol Nadelson, MD
Professor & Vice Chairman, Department of Psychiatry
Tufts University School of Medicine
New England Medical Center

12:15 PM LUNCH (Dewey I, Plaza level)

1:30 PM RECONVENE PLENARY SESSION (James Room, Lobby level)
• "Effects on Juveniles of Being Used for Prostitution and Pornography"
Author: Mimi H. Silbert, PhD
President & Chief Executive Officer
Delancey Street Foundation
Discussant: Robert W. Deisher, MD
Professor of Pediatrics
Director, Division of Adolescent Medicine
University of Washington School of Medicine

3:00 PM COFFEE BREAK

3:15 PM RECONVENE PLENARY SESSION (James Room, Lobby level)
• "Techniques Designed to Mitigate the Impact of Mass Media Sexual
Violence on Adolescents and Adults"
Author: Edward Donnerstein, PhD
Professor, Center for Communications Research
Department of Communications Arts
University of Wisconsin at Madison
Discussant: Gene G. Abel, MD
Professor of Psychiatry
Emory University School of Medicine

4:45 PM ADJOURN AFTERNOON SESSIONS

6:30 PM DINNER (Dewey I, Plaza level)
• "FBI Research and Violent Criminal Behavior"
Robert Ressler, Supervisory Special Agent
National Center for the Analysis of Violent Crime
FBI Academy

Monday, June 23, 1986, (Cont'd)

8:00 PM RECONVENE PLENARY SESSION (James Room, Lobby level)
• "On Showing Sex to Children: Video and Remarks"
Bradley Greenberg, PhD
Chairman, Department of Telecommunications
Michigan State University

Tuesday, June 24, 1986

7:30 AM BREAKFAST (Dewey I, Plaza level)
8:30 AM CONVENE IN TWO CONCURRENT CONSENSUS SESSIONS
Participants will be assigned to one of the following sessions:
• Consensus Session I (Room 104, First floor)
"Effects of Pornography on Children and Young Adults"
Facilitator: Joyce N. Thomas, RN, MPH
Director, Division of Child Protection
Children's Hospital National Medical Center
• Consensus Session II (Room 204, Second floor)
"New Possibilities for Prevention and Treatment"
Facilitator: Carol Hartman, RN, DNSc
Professor, Boston College
School of Nursing
10:00 AM COFFEE BREAK
10:15 AM RECONVENE CONSENSUS SESSIONS I AND II
11:00 AM CONVENE IN CONSENSUS SESSION III (James Room, Lobby level)
• "The Research Agenda for the Future"
Facilitator: Murray A. Straus, PhD
Director, Family Research Laboratory
University of New Hampshire
12:15 PM LUNCH (Dewey I, Plaza level)
1:15 PM RECONVENE IN PLENARY SESSION—WORKSHOP SUMMATION
• Presentation to the Surgeon General Results from Consensus Sessions I,
II, III
• Surgeon General's Response
2:30 PM WORKSHOP IS ADJOURNED

All plenary sessions will be recorded.

*This workshop is being held as the request of the Attorney General's Commission on
Pornography. Funding is provided by the U.S. Justice Department*

List of Participants

Gene G. Abel, MD
Professor of Psychiatry
Emory University School of Medicine
Atlanta, Georgia

Albert Bandura, PhD
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Stanford University
Stanford, California

Ann W. Burgess, RN, DNSc
Professor of Nursing, School of Nursing
University of Pennsylvania
Philadelphia, Pennsylvania

Donn Byrne, PhD
Professor and Chair, Department of
Psychology
State University of New York
Albany, New York

Jon Conte, PhD
Assistant Professor, School of Social Service
Administration, University of Chicago
Chicago, Illinois

Jessica Henderson Daniel, PhD
Supervising Staff Psychologist, Judge Baker
Guidance Center, Children's Hospital
Boston, Massachusetts

William Daniel, Jr., MD
Emeritus Professor of Pediatrics and Chief
of Adolescent Medicine
University of Alabama School of Medicine
Montgomery, Alabama

Robert W. Deisher, MD
Professor of Pediatrics and Director of
Adolescent Medicine
University of Washington School of Medicine
Seattle, Washington

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Research, University of Wisconsin
Madison, Wisconsin

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Carol Hartman, RN, DNSc
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Chestnut Hill, Massachusetts

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Kathryn Kelley, PhD
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State University of New York
Albany, New York

C. Everett Koop, MD, DSc
Surgeon General, U.S. Public Health Service
Washington, D.C.

Neil M. Malamuth, PhD
Chair, Communications Studies
University of California
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Western Psychiatric Institute and Clinic
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Pittsburgh, Pennsylvania

Carol Nadelson, MD
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Albert Serrano, MD
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Philadelphia Child Guidance Center
University of Pennsylvania
Philadelphia, Pennsylvania

Mimi Halper Silbert, PhD
President and Chief Executive Officer
Delancey Street Foundation
San Francisco, California

Murray A. Straus, PhD
Director, Family Research Laboratory
University of New Hampshire
Durham, New Hampshire

Joyce N. Thomas, RN, MPH
Director, Division of Child Protection
Children's Hospital Natl. Medical Center
Washington, D.C.

Dolf Zillman, PhD
Professor, Institute for Communications
Research, Indiana University
Bloomington, Indiana

OVERVIEW

Purpose of the Report

From certain perspectives, the question of restraining the availability and use of pornography is a relatively straightforward issue. For the active moralist, for example, it is an instance in which the government should fulfill its obligation to provide a healthy public atmosphere for the development of its citizens. For the ardent feminist, government restrictions can combat a system that promotes the active subjugation of women and the fostering of the public perception that women actually desire subjugation. For the avid civil libertarian, restrictions in this area should be resisted as dangerous indicators of a government's capacity to control information and thus undercut our basic freedoms. Although the particulars of governmental action are not resolved by any of these general positions, the limits of acceptable action are clearly set by them.

This report does not attempt to side with, reconcile, or even comment upon the general positions that can be taken on restricting pornography. The aim is much more modest. This report summarizes the consensus of a group of social scientists and mental health professionals regarding the nature and extent of evidence about the effects of pornography, especially the effects on children and adolescents. The purpose of this assessment is not to prescribe public policy. To assume that social science or clinical practice offers such dispositive wisdom would be to greatly overestimate both the scope and accuracy of professional knowledge. Public policy decisions are better decided by the balancing of tensions engaged in by judges, legislators, and social critics.

An examination like the present one informs those more central to the policy process about the views of a group of social scientists regarding what is known in an area and what yet needs to be known in order to make more definitive statements. In performing this function, social scientists help to clarify the evidence that supports or refutes arguments for certain courses of social action. Expert commentary on the validity of assumptions of fact or the adequacy of theory is valuable to the policy formation process because it highlights the line between accepted social science evidence and values or morality. Ideally, it can thus force discussion of these latter issues to be done more openly.

Previous Investigations Into the Effects of Pornography

The Surgeon General's workshop that generated this report was not the first governmentally sponsored effort to examine the question of the social effects of pornography. In the late 1960's, the Commission on Obscenity and Pornography was formed, and after funding much research and holding many hearings, released its report in 1970. Its findings were basically summarized in its introduction: "Empirical research designed to clarify the issue has found no reliable evidence that exposure to sexually explicit materials plays a significant role in the causation of delinquent or criminal sexual behavior among youth or adults." The report was criticized by both Commission members (Cline, 1970) and others (see Kafka, 1985) for flaws in the design of some commissioned research, misinterpretations of some of the research, limitations of the scope of much of the research done. Despite criticisms, however, the general conclusion of the Commission—that pornography has no marked social effects—has continued to be the generally accepted and often cited wisdom in this area.

In response to a growing concern over child pornography in particular, both houses of Congress held hearings into the issue of child pornography in 1977. During these hearings, witnesses estimated that between 300,000 and 600,000 children were involved in the production of pornography and that more than 260 child pornography publications were being produced (Pierce, 1984). Subsequent to these hearings, the federal government and nearly all state governments enacted laws against the production, distribution, and possession of child pornography.

In 1979, the British government sponsored the Committee on Obscenity and Film Censorship. The conclusions of this Committee, based in large part on a research review by Yaffe and Nelson (1979) were similar to those of the 1970 United States Commission on Obscenity and Pornography. Like its predecessor, however, this committee report was also criticized for its failure to include what were considered relevant research studies (Court, 1980).

The Canadian government convened the Special Committee on Pornography and Prostitution, which delivered its report in 1985. The Committee found that while individual research projects had shown some of the effects of pornography, as a whole, the research was contradictory and inconclusive, and could not be relied upon as a guide for policy formation.

The United States Attorney General's Commission on Pornography was formed in 1985 in response to a number of concerns: (a) continuing criticism of the findings of previous commissions; (b) recent technological advances and changes in social standards that had allowed both youth and adults easier access to pornography; (c) recent research (e.g., Malamuth & Spinner, 1980; Smith, 1976) indicating that the

content of both "hardcore" and traditional "softcore" pornography had changed in the 1970's and 1980's to include considerably more sexually violent material; and (d) preliminary research suggesting that these new forms of pornography had different effects on viewers' attitudes and behaviors than the pornography studied earlier. These developments called for a reassessment of the possible impact of the changes in the content and patterns of use. Moreover, a new research approach had emerged, emphasizing that the message communicated by the pornography might have at least as much effect as the explicitness of the sexual content, and an evaluation of new findings thus seemed in order.

The mandate of the Commission was in part to "determine the nature, extent, and impact on society of pornography in the United States, and to make specific recommendations to the Attorney General concerning more effective ways in which the spread of pornography could be contained, consistent with constitutional guarantees." Although no new research was funded by this Commission, it did undertake public hearings in which current research was explained and information about the current manufacture and distribution of pornography was gathered. Numerous witnesses who viewed themselves as victims of pornography also testified.

The Surgeon General of the United States was asked to testify before the Attorney General's Commission, and subsequently agreed to provide the Attorney General with a report summarizing the evidence that was available from the scientific community regarding the effects of pornography on public health. In order to provide this information, the Surgeon General's Workshop on Pornography was convened, consisting of 20 members from the communications, medical, mental health, and social science fields. The goal of the Workshop was to provide the Surgeon General and the U.S Public Health Service, as well as the Attorney General's Commission, with information regarding three general questions: (1) what is known, with a reasonable degree of certainty, about the effects of pornography on the mental and physical health of those in the United States, especially on children and young people; (2) what additional effects are justifiably suspected and how these posited effects could be verified or refuted; and (3) what actions could be taken by those in the medical, mental health, and public health fields in order to combat any negative effects of pornography.

Papers were prepared by five experts who had either conducted research into the effect of pornography or were familiar with the effects on youth who had participated in the production of pornography. These papers and discussant reactions to the papers served as focal points for the first part of the Workshop. Three consensus sessions were then held: one to summarize current knowledge about the effects of pornography on children and adolescents, a second to suggest prevention and intervention measures for those who might be or have been affected by pornography (either as con-

sumers or as participants in its production), and the third to outline a course of future research.

This report captures the essence of the discussions held during the two days of the Surgeon General's Workshop on Pornography. A general discussion of the process of research in this area is presented first. Then, the conclusions of the Workshop participants regarding the effects of pornography are presented, as well as the evidence upon which these conclusions were based. Finally, recommendations for prevention and treatment and for future research are given.

BASIC RESEARCH PROBLEMS

The Underlying Issues

Designing and executing research to isolate the unique effects that exposure to pornography may have on children and adolescents is a formidable task because of the methodological and ethical barriers inherent in doing such investigations. Exposure to pornography is only one of many interdependent factors potentially affecting a child, and attempting to isolate its unique effects forces the researcher to oversimplify the complex process of development. Moreover, conducting investigations regarding exposure to pornography while protecting subjects from potential harm creates a number of vexing ethical dilemmas. Given these constraints, it is not too surprising that the amount of directly relevant information that can be gathered from the social sciences regarding this question is limited.

It is important to note first that the effect on children of any particular influence like exposure to pornography is the result of many interacting factors. Most obviously, the effects of exposure are likely to differ depending on the age of the child. Because of new cognitive and social skills that develop as a child matures, the effect that an experience with pornography has at one age does not always correspond to the effect that it has at another. In addition, recently it has become clear that there is considerable variation between children in their proclivities for certain activities or susceptibility to particular influences. Children bring dispositional tendencies and early learning patterns into any interaction with the environment, and these may also produce wide variation in the impact that any particular influence or incident has on the child. Finally, exposure to pornography does not occur in a vacuum. Like any other factors that might influence child development, exposure to pornography is unlikely to exert an influence totally distinct from the setting and social context in which it is experienced. For example, a short exposure and subsequent discussion with a parent about the factual accuracy or value message of the material would in all likelihood have a quite different effect than repeated solitary exposure. How to test systematically the effects of exposure to pornography in the face of this myriad of potential influences is obviously quite a methodological challenge.

Even if one is willing to chip away systematically at these multiple interactions through circumscribed investigations, however, there are ethical constraints that inevitably limit the types of research designs that can be used. Because the exact short term effects on children of exposure to pornography are unknown, and because exposing youth to pornography for experimental purposes could conceivably produce actual ill effects, this tactic violates a basic moral sense of the limits of acceptable social scientific practice. The researcher, therefore, is caught in a Catch-22 situation. It is impossible to know exactly what effects different types of materials might have on children without investigating the phenomenon systematically, but it is impossible to do the investigations as long as adverse effects are hypothesized. Moreover, showing an effect would guarantee that future investigations would be even further restricted, since there would then be proof of the risk.

Aside from the simple fact that showing pornography to children is a morally distasteful and at present an ethically unsupportable manipulation, the lack of clear knowledge or theory regarding expected long term outcomes of such exposure also presents an ethical difficulty. Even if it could be demonstrated that negative short-term effects could be controlled by debriefing, it would still be important to be able to assert that long term effects of a child's involvement in such research would be negligible. Because of the possible multiple interactions between exposure to pornography and other contextual and dispositional variables, however, it is impossible to predict what the ultimate effects of such exposure might be for a youth taking part in such research. Without adequate theory to guide an assessment of the risks of this research for children, investigators are unable to present a balanced (even if only theoretical) argument regarding methods to protect against ill effects. In the end, the individual risk factors predisposing children to various influences are too unclear, the potential negative outcomes are too diffuse, and the theory too sparse to protect children taking part in the direct research that would need to be done.

Because of these ethical constraints, we are unable to scientifically test many of the propositions related to the effects of pornography on children. Thus, the field of available data upon which any general conclusions can be based is bound to be of questionable scientific rigor. Instead of examining direct tests of hypotheses, we must extrapolate and speculate regarding the effects of pornography on children and adolescents from related research. There are three basic types of investigations—clinical, laboratory, and correlational—that are relevant in this effort, and each one has its advantages and limitations. It is useful to be aware of the qualities of each approach while considering the applicability of their findings to children and adolescents.

Clinical Studies

One source of information about the effects of pornography on children and adolescents are clinical studies involving youth who have come to the attention of juvenile justice or mental health agencies. These reports are valuable because they provide a glimpse at the casualties of youthful exposure to harmful influences. Unlike statistical analyses of patterns within large groups of subjects, clinical studies frame problems in human terms. Devastating subjective experiences do not become diluted by numbers representing differences between group averages.

The rich texture of clinical data is valuable for the development of theory, especially in an area like pornography where ethical considerations prohibit empirical investigations with larger, more representative samples. Clinical studies highlight relevant issues to be considered in any theoretical formulation and pose potential hypotheses regarding the mechanisms behind certain observed effects. Clinical accounts provide direction for more controlled investigations and promote theory that is linked to the subjective experiences of the practitioners and the youth involved.

Clinical studies are limited in value, however, when testing hypotheses and theories. Their greatest general limitation is the inability to isolate the specific effects of the variable being considered (such as exposure to pornography) from other potentially influential variables. Using clinical data alone, it is impossible to attribute a particular amount of an observed effect to a variable in question. For that matter, it is impossible to conclusively attribute any effect to a specific variable. In order to make such causal statements, it is necessary to compare the effects seen in a clinical sample with those seen in an appropriately matched control group. This cannot be accomplished through the use of clinical samples alone.

Clinical studies have another problem resulting from their focus only on youth with identified problems. The effects of the circumstances that form the basis for the identification (e.g., sexual abuse) cannot be separated accurately from the effects of the discovery of those circumstances. For instance, it is impossible to tell with any rigor how much of the distress shown by a child in therapy results from actual participation in pornography and how much is precipitated by the reactions of others such as parents, friends, and teachers to the discovery of the child's involvement. For example, Burgess, Hartman, MacCausland and Powers (1984) found that behavioral problems of some children involved in sex and pornography rings increased after their participation was discovered. The identification process itself provides an influence on behavior that is very difficult to gauge.

Perhaps the most subtle problem with clinical reports is the inevitable tendency

for individuals who report on clinical phenomenon to interpret and report their observations in a way that supports their beliefs about the phenomenon in question. Those writing clinical reports have beliefs that necessarily influence the general approach taken to the subject matter, the types of questions asked, and the interpretations of the results. The lack of a broadly accepted method in this area is both a strength and a weakness. It allows for insightful and broad analyses and condones bias at the same time, often resulting in contradictory findings and conclusions that produce more careful debate than resolution. Clinical reports thus often illustrate, but rarely irrefutably substantiate, different perspectives on a question.

All of these concerns make it troublesome to rely solely upon clinical reports to gain a clear picture of the potential problems connected with exposure to or involvement in pornography for children and adolescents in general. Children who have run away from home and are encouraged to produce pornography by being shown pornographic pictures do not necessarily represent all children, and their reactions to being shown pornography do not necessarily represent the inevitable response of children to exposure. Similarly, the effects on delinquent youth of viewing pornography do not necessarily mirror those of nondelinquent youth. The reactions of these select samples to participation in or exposure to pornography may differ significantly from those of children from less troubled backgrounds.

It is important, therefore, to remember the values and limits of clinical research as the literature in this area is reviewed. Rather than interpreting clinical accounts as proof, we should instead view them as rich reminders of how devastating certain influences can be to victimized children. In addition, they can clearly point toward the issues that must be addressed more rigorously and make us feel why it is so important to pursue those investigations.

Laboratory Studies

Laboratory research provides another source of potentially valuable information about the effects of exposure to pornography. Using controlled settings and consistent materials, this type of research can systematically test for individual differences produced by altering either the types of pornographic materials seen or the conditions under which they are seen. The attraction of this approach is that it is "scientific" in the sense that hypotheses can be directly tested and findings can be amassed to support global theories. The drawback of such an approach is its inherent artificiality; phenomena in the lab are not always what they may be in the real world.

The advantages of this approach for increasing our understanding of the effects of exposure to pornography are considerable. First, it allows for control over the types and amount of materials seen. As a result, the effects of sexually explicit materials can be compared to the effects of sexually violent materials or the effects of single exposures can be compared to those obtained with repeated exposures. Second, this approach allows for control over possible extraneous variables that might affect the results, allowing heightened confidence that any observed differences were caused by the factors that were manipulated. For instance, individuals can be randomly assigned to different conditions of exposure to control for self-selection factors, or anger levels can be manipulated before testings for the display of an outcome behavior of interest. Third, it promotes the systematic construction of theory regarding the mechanisms by which any effects resulting from exposure occur. Results from one series of experiments can be further refined in later studies until a clearer picture emerges. Laboratory aggression against women in these studies, for example, has been shown to be affected by the content of sexually violent materials, thus promoting a theory of a synergistic effect between the presentation of violence and sex in promoting targeted aggression against women.

There are also many limitations of laboratory approaches applied to studies of exposure to pornography. First, as mentioned earlier, there is the nagging question of whether the results obtained in the lab actually reflect the world as it is outside of the lab. The vast majority of lab studies in this area use college students as subjects, create manipulations that are usually contrived and less complex than the influences occurring in real life, and produce effects that are only analogues of the actual behaviors of interest. Regarding pornography, the concern about the applicability to the everyday world centers on whether the attitudes and behaviors of college students regarding sex are adequately representative of the general population, whether the types and patterns of exposure in the lab are comparable to regular or sporadic pornography use, and whether the short term effects produced can be interpreted as having any substantial relationship to behavior patterns outside the lab. There is a particular related concern that those individuals who volunteer for laboratory studies (especially those studies involving penile tumescence measures) may not be representative of the general pool of potential subjects, possibly being more sexually liberal and having more varied sexual experiences (e.g., Malamuth & Check, 1983).

Second, laboratory studies operate primarily from a hypothesis testing model. In this approach, demonstration of differences between groups exposed to different treatments is taken as evidence that the manipulation has been sufficiently powerful to rule out the possibility that the observed group differences were produced merely

by chance. A lack of differences is taken to mean that the manipulation did not have an effect substantially greater than what might have resulted from random fluctuations, but it does not necessarily rule out the possibility that there might be an effect under slightly different circumstances. Thus, this model for experimentation nearly guarantees that only significant results will be reported in the literature, since "no effect" is an inconclusive statement. As a result, it is difficult to know how many studies were done that were unable to produce any observed result. This generally unavailable information is important because the presence of a large number of these unreported results may indicate that the regularity and strength of a particular effect is really rather low even though it has been reported to have occurred under controlled conditions (Rosenthal, 1978). This drawback makes it impossible to merely compare the number of published studies showing a particular effect and those not showing the effect, when assessing whether the effect exists.

In a related vein, it is difficult to judge whether the strength of an effect that will produce statistically significant group differences in a controlled study reflects a difference that is of significant magnitude in the real world. A difference of 2.5 on a 7-point rating scale completed by a large number of college students, for instance, may produce a highly statistically significant effect in a controlled study. Whether this difference really translates into an attitude difference of noticeable proportions in the real world, however, is another question. In short, lab studies offer the opportunity to construct theory but can only rarely test how well that theory goes beyond the controlled setting of the lab.

Correlational Studies

The third type of social scientific evidence commonly considered when attempting to assess the effects of pornography is that examining relationships between or changes in social indicators. This strategy usually involves examining the correlation between two indicators under different conditions (e.g., the incidence of rape and the distribution of sexually oriented magazines in different states) or changes in the frequency or magnitude of an indicator over a given time period (e.g., changes in rape rates after a loosening of the restrictions on pornography). Examinations of social indicators are particularly useful for generating hypotheses about how people might be acting or for predicting how a social system might operate.

Because of their general nature, investigations using these designs are open to several problems. The major problem is their limited capacity to control for the numerous variables that may be contributing to any observed correlation or shift. For

example, a shift in demographic composition or reporting practices over time can affect the relationships seen in aggregate population data, or other unmeasured variables can be mediating a relationship between the two variables being examined. These influences may cause the change in one variable to be mistakenly attributed to a second variable. Researchers attempt to guard against these influences by examining changes in other variables that might be logical causes of the observed changes, but it is always an open question whether enough of these extraneous factors have been considered or if the researcher has examined the right ones. Somewhat like clinical studies, correlational research offers us a glimpse of the real world, but at an aggregate level that is highly dependent upon the measures chosen.

Studies of this sort also come under considerable criticism regarding the accuracy with which the social indicators chosen actually reflect the particular theoretical notion in question. Variables are usually taken from existing data bases and are assumed to be reasonable proxies for more abstract notions. The number of "adults only" movie theaters in an area, for example, might be used as an indicator of a community's acceptance of pornography, or salary differential between sexes might be used as an indicator of the status of women. How well these measures actually capture the concept under consideration, however, is often debatable, and there is often the real possibility that different results would have been obtained using different indicators.

Finally, interpretation problems arise with studies of social indicators. It is often difficult to keep in mind that associations seen in aggregate data may or may not reflect processes operating within or among individuals. For example, although the availability of sexually explicit materials may be correlated with the incidence of rape in particular areas (Baron & Straus, 1984), this association does not mean that the same individuals are accounting for both rates. This observed relationship could be present even if two totally nonoverlapping groups of individuals were accounting for each indicator. As a result, investigations of this sort that rely on aggregate data provide no conclusive information about the extent of the relationship of the variables of interest in the individuals who compose the groups examined.

In the end, the best that can be offered are demonstrations of an observed correlation, but no real information about whether the results indicate a causal relationship. Because of the open-ended nature of the arguments that can usually be raised against any observed correlation, studies of this sort are usually viewed as adjunct sources of support for particular arguments or as indicators of potentially fruitful places to begin more controlled studies.

Summary

Given the problems with each of these approaches to research, one might be left with the impression that all social science data is flawed to the point of being unconvincing to the discerning reader. This interpretation, however, would be overly harsh. Instead, what should be taken from this critical review is the simple idea that no one study or set of findings using only one method should be taken as definitive. While certain questions are best suited to particular forms of investigation, one piece of evidence standing alone or without considerable theoretical support should be viewed with skepticism.

When more than one approach is used to investigate the same specific question or hypothesis and consistent findings emerge, however, it is evident that something has been found that warrants consideration by policymakers and researchers alike. There are ways that each method outlined above compensates for the inadequacies of the other methods and consistent findings therefore argue for little likelihood that the particular approach taken has skewed the results in a particular way. Each of the above methods has been used in examining the effects of pornography, and an assessment of what this evidence ultimately says requires a careful weighing of the methods used and the consistency of findings across different methods. There are some statements that can be made with scientific confidence because they are validly demonstrated and/or theoretically sound.

CONSENSUS STATEMENTS

Introduction

Workshop participants were given the charge of reaching some consensus regarding the effects of pornography on the public health of citizens, especially children and adolescents. The list of consensus statements that emerged was intended to provide a reasoned, rather than a partisan, summary of what social science can say with confidence about the effects of pornography. Each of the five consensus statements that follows relates to a circumscribed effect of pornography that is supported by directly relevant social science data and is tenable in light of demonstrated theory in related areas of inquiry.

There have been many claims other than those listed here regarding the effects of various forms of pornography. What are listed here are conclusions that have, in the opinion of the participants, been demonstrated with a required degree of social science accuracy. This is not to say that other purported effects of pornography have been examined and found to be false. Presently, however, the state of the evidence in this area appears to substantiate only the following limited conclusions.

Consensus Statements

**Children and adolescents who participate
in the production of pornography
experience adverse, enduring effects.**

Involvement of children in the production of pornography is a form of sexual exploitation, victimizing vulnerable children and leaving them with the aftermath of this involvement. Sexual exploitation has been linked to a variety of adverse emotional, behavioral, and somatic consequences in children as well as adults who were exploited as children. Incidents of sexual exploitation are not easily put aside by a child, but instead appear to re-emerge as a variety of difficulties (for a review, see Finkelhor & Browne, 1986).

Several aspects of the process of sexual exploitation are theorized to be important contributors to the emergence of adverse effects. Finkelhor and Browne (1985) have theorized that these effects can be caused by several factors: traumatic sexualization, betrayal, powerlessness, and stigmatization. Traumatic sexualization is a result of the child being involved in, and rewarded for, developmentally inappropriate sexual behavior. This can produce an obsession with or aversion to sexuality, and may be seen behaviorally in childhood and/or adulthood as a preoccupation with sexual activity, sexual dysfunction, or phobic reactions to intimacy. Betrayal results from the child being manipulated by a trusted adult. Effects can be depression, dependency, mistrust, and hostility, and behavioral consequences can include isolation, vulnerability to other abuse, and conduct problems. Powerlessness results from a sense of vulnerability felt because of repeated invasion of the child's body and the inability of the child to stop the abuse. Effects include anxiety, fear, self-perception as a victim, and identification with the abuser. Behavioral consequences include somatic difficulties, sleep disturbances, school phobias, and delinquency. Finally, stigmatization can occur as a result of the child blaming his or herself for the abuse or being blamed for the sexual activity by the abuser, the child's family, or others. Effects of this process are thought to be guilt and lowered self-esteem. Possible behavioral consequences include isolation, drug use, criminal activity and self-destructive behavior.

Involvement with pornography does seem to have a place in the dynamics of sexually exploiting children. Pornography has been used by adults to teach children how to perform sexual acts and to legitimize the children's participation by showing pictures of other children who are "enjoying" the activity. In some cases involvement in the production of pornography has led to other sexual activity; in others, pornography involvement has followed sexual activity.

Since most children and adolescents involved with pornography are also involved in prostitution or other sexual activity with adults (Burgess et al., 1984), and since many come from homes where they experienced neglect and abuse (Silbert & Pines, 1984), the specific effects of involvement with pornography cannot be isolated cleanly. Involvement with pornography is one of many influences operating in the lives of these youth, and discussion of the effects of participation in the production of pornography must be understood in terms of the combined effect of this influence with previous negative life experiences. There is no reason to believe, however, that involvement with pornography is less traumatizing than other forms of sexual exploitation of children. There is even some suggestion that it may produce a unique form of trauma since the child knows that there is a permanent record of his or her participation.

Evidence about the role and effects of pornography in sexually exploiting children necessarily comes exclusively from clinical studies. Burgess et al. (1984) completed extensive interviews with 62 children referred by law enforcement agencies when their participation in sex and pornography rings was discovered. Although one of the most extensive investigations of its kind, the authors noted several possible limitations to the generalizability of the results of the interviews to all children involved in such activity. Most notably, the sample might not have been representative of all such children since only those referred by law enforcement agencies were interviewed and 14 children who could have participated were not permitted by their parents to do so. Also, the children's emotional and behavioral patterns may not reflect those found in children whose participation had not been disclosed.

Difficulties reported by the children as occurring during their association with the sex rings included somatic complaints, sleep disturbances, withdrawal from peer and adult contact, and acting-out behaviors. Disclosure of the children's involvement in the rings produced new symptoms in 49 of the children and caused the exacerbation and solidification of existing symptoms in many others. Data analysis indicated that those involved in a sex ring for more than one year and those involved in the production of pornography (34 children) were more likely to exhibit more severe symptomatology. Unfortunately, the specific contribution that each of these two conditions made to the symptomatology is unclear.

From structured interviews with hundreds of children, adolescents, and young adults, Silbert (1986) compiled a list of symptoms exhibited by those involved with pornography. Those involved with pornography at the time of the interview were seen as uncommunicative, withdrawn, inattentive, and fearful. Long-term consequences of those who had been involved earlier were characterized by the internalization of those behaviors. That is, the adolescent personalities of previously involved youth were best characterized as withdrawn, anxious, and paranoid. Only five of the subjects interviewed had previously disclosed their involvement with pornography. For the two whose disclosure met with support by those in their environment, a time of initial heightened turmoil was followed by a more healthy resolution. For the others who were met with disbelief or punitive reactions, the disclosure meant an exacerbation of their negative reactions.

In a contradictory report, Inciardi (1984) interviewed nine girls between the ages of 8 and 12 who were involved in prostitution and pornography and found few overt signs of disorder. All of the girls had been introduced into the sexual activity by parental figures, all of whom were already involved in prostitution or pornography. None of the girls' activities had been disclosed to law enforcement or social service

agencies, and their involvement in sexual activity was ongoing. Four of the girls reported that they did not use drugs, and Inciardi stated that the others' drug use did not seem to be directly related to their sexual activities.

While these findings are counter to the previously cited investigations and the more generally accepted notion of the grave impact of such activities on children, several aspects of the group of girls interviewed must be considered as possible factors producing these results. First, the sample was small and not necessarily representative of all girls in similar circumstances. The girls' parents encouraged their sexual activity and the appearance of the activity as more normal may have mitigated the effects reported by other children. Second, the girls were still quite young. As Inciardi noted, these girls had the same trouble expressing affect as do other children their age, and this limitation may have produced an underreporting of symptoms in the short interview used. Moreover, many effects of sexual exploitation may not appear until the occurrence of significant life events involving sexuality or intimacy (Gelinis, 1983). The lack of current symptoms, therefore, does not preclude later problems around dating, intimate relationships, or childbearing. Finally, the sexual activity had not been disclosed. Recalling that symptoms can increase in severity after disclosure (Burgess et al., 1984), there is the possibility that these girls may have presented (or may yet present) a different clinical picture after the possibly traumatic experience of disclosure.

Although it is impossible to isolate the effects of participation in the production of pornography from the effects of the other forms of sexual exploitation that are often experienced by those involved in pornography, clinical evidence indicates almost unequivocally that the effects of such involvement are adverse and enduring. Whether or not we can generalize from the reported effects to all those involved in the production of pornography has not been shown, yet it is clear that harmful effects are experienced by many. While some evidence is available of minor effects when participation is encouraged by parental figures, this evidence is not overwhelming. In the end, it is fair to conclude that pornography plays a clear role in the sexual exploitation of children, and that this exploitation produces damaged children and adults.

Prolonged use of pornography
increases beliefs
that less common sexual practices
are more common.

The basis for this conclusion comes mainly from the work of Zillmann and Bryant (1982) and the application of recent theoretically relevant findings from cognitive psychology research. The theme of this conclusion is that repeated exposure to pornography is likely to alter one's estimates of the frequency of people engaging in behaviors similar to those depicted. While there is only one direct experimental test of this premise, these results match other studies of human judgment processes using materials other than pornography as content. The research study can thus be seen as a demonstration that an observed, theoretically sound psychological mechanism appears to be operating when individuals are repeatedly exposed to pornography.

Zillmann and Bryant (1982) exposed a group of male and female undergraduates to varying amounts of pornographic films. The massive exposure group watched six different eight-minute sexually explicit films during each of six weekly sessions, the intermediate exposure group watched three erotic and three nonerotic films, and the no exposure group watched six nonerotic films. All of the erotic films contained only consenting heterosexual activities of fellatio, cunnilingus, coition, and anal intercourse.

Three weeks after the end of the film presentations the subjects completed several questionnaires, one of which asked them to estimate the percentages of adults in the United States that engaged in various common and uncommon sexual practices. Those in the intermediate and massive exposure groups, compared to the no exposure and no prior treatment groups, estimated that significantly higher numbers of adults engaged in fellatio, cunnilingus, and anal intercourse. Comparison with data from broadly based sexual surveys indicated that the estimates of the intermediate and massive exposure groups were actually more accurate than the no exposure and no prior treatment groups, which underestimated the prevalence of these behaviors. Of particular interest was the additional finding that estimates of the prevalence of group sex, sadomasochism, and bestiality were higher for the massively exposed group than the other groups, even though none of the pornographic material to which they were exposed included these types of activities. Those in the massive exposure groups significantly overestimated the reported prevalence of these activities.

This study indicated that those viewing intermediate or massive amounts of more commonly accepted pornography over a six-week period believed that these forms of sexual behavior occur more frequently in the general population than those with no exposure to pornography during the same time. Also, those who viewed more massive amounts of pornography believed that less common forms of sexual behavior which were not included in the materials seen also occur more frequently. In short, the perceptions of the subjects regarding the prevalence of sexual practices were affected by the amount of pornography that they viewed. However, the implications of this change in perception toward attitudes of tolerance for the material or the less common sexual practices were not and have not been investigated.

This single study would not be as convincing if its results were not so predictable in light of other research. Recent work in cognitive psychology has consistently found a set of processes that appear to drive human judgment under conditions of uncertainty (see Kahneman, Slovic & Tversky, 1982). When confronted with problems requiring estimates of the likelihood of an event occurring, people appear to perform a selective search of the outcomes of representative situations that they have encountered, and rely heavily on their recollection of the outcome of the most cognitively available incidents for representations. The availability of these cognitive reference points is influenced by the recency of a person's contact with the given material or the dramatic salience of the material.

Since pornography is a primary means by which many people (especially children and adolescents) learn about the sexual behavior of couples, and since there is seldom any corrective, more accurate information available, it is easy to see how this material can affect perceptions about how common certain behaviors are. Exposure could logically provide a heuristic of couple's sexual behavior in which less common acts are regular occurrences. Moreover, regular exposure could help to make these representations highly available as reference points. While more research is obviously required to gain a full picture of how repeated exposure to pornography affects perceptions, it presently appears that exposure to this content material operates in a way consistent with what would be expected.

**Pornography that portrays sexual aggression
as pleasurable for the victim
increases the acceptance of the use of coercion
in sexual relations**

This statement is based on experimental findings, the fact that these findings are congruent with theoretical notions of attitude formation, and clinical reports from samples of sex offenders. None of the available data sources taken alone are sufficient to posit an effect of violent pornography of a particular type on attitudes. Taken together, however, there appears to be a convincingly clear picture of attitudes toward the acceptability of sexual coercion being substantially altered by exposure to particular types of violent pornography.

Since the 1970 Commission on Obscenity and Pornography, a number of researchers have explored the possibility of distinct effects related to exposure to violent pornography. These studies have been undertaken primarily because of the perceived increase in the availability of violent sexual materials (Malamuth & Spinner, 1980; Dietz & Evans, 1982) and the fact that the Commission only tangentially considered the possibility that these materials could exert an influence unique from erotic pornography. As part of this line of laboratory studies, attitudes have been investigated as possible factors potentially increasing or decreasing any behavioral effects produced by exposure to violent sexual materials. Attitudes in these studies have been measured using a variety of paper and pencil scales, with measures of the same type also used to gauge the individual's pre-existing, self-assessed "proclivity" toward rape. These investigations have been and continue to be classical, social psychological laboratory studies, almost exclusively using undergraduates as subjects and questionnaires or simulated tasks as outcome measures.

Two studies using this approach (Malamuth, Haber & Feshbach, 1980; Malamuth & Check, 1980) have shown that exposure to pornographic rape scenes in which the assault resulted in the female victim's sexual arousal altered males' assessments of a later rape depiction. These studies compared the effects of materials in which the victim was aroused by the attack, the victim abhorred the attack, or two people were involved in a mutually consenting act. Those viewing a scene in which the victim was aroused by the attack saw the victim of the later rape depiction as having suffered less.

Another study (Malamuth, Reisen & Spinner, 1979) failed to show similar effects regarding a later rape depiction, however. In this study, exposure to aggressive pornography films showed no effects on an immediate assessment of an interview with a rape victim or on attitude survey responses regarding the seriousness of rape obtained three weeks later. What is striking about this study, however, is that the materials used did not show the victim becoming aroused by the attack, but were instead merely pictures of sadomasochism and rape. Unwittingly, these researchers provided verification of one of the conditions of the other studies, testing for the presence of an effect using violent materials without depictions of victim arousal. The fact that there were no effects thus lends credence to the supposition that the portrayal of victim enjoyment or repulsion is an important determinant of any attitude effects produced by violent pornographic materials.

Another investigation using a slightly different methodology provides confirming evidence. Malamuth and Check (1981) compared three groups of male and female undergraduates regarding changes in their acceptance of rape myths (e.g., that women actually want to be attacked) and their attitudes toward the acceptability of violence in sexual relations (as measured using three scales developed by Burt, 1980) as the result of their exposure to violent sexual materials. Under the guise of examining the movie rating process, these researchers had one group of students see two movies showing a favorable victim response to rape and another group see two neutral movies without violent sexual content. Both groups saw the movies in a theater as part of a regularly scheduled film series rather than being exposed to them in a laboratory setting. Males, but not females, showed significantly higher acceptance of interpersonal violence and an increase in rape myths when tested several days later as part of an apparently unrelated general attitude survey given in class.

An interesting and important secondary finding of this study was that the greater proportion of the shift in attitudes in the group that was exposed to the materials showing the aroused victim was produced by individuals who reported a higher likelihood to rape. These researchers asked subjects to indicate the likelihood that they would rape a woman if it could be guaranteed that they would not be caught. This "likelihood to rape" (LR) scale had been used in previous research and shown to have adequate validity for distinguishing individuals with pre-existing favorable attitudes toward violent sexuality (see Malamuth, 1984, for a discussion of the development of this scale). Subjects scoring high on this scale were more likely to show attitude changes as the result of exposure to materials in which the victim showed arousal.

Whether the victim becomes aroused as the result of a violent sexual attack has also been shown to be a significant factor related to the arousal patterns of males.

As might be expected, nonrapists have shown higher arousal (as measured by penile tumescence) to depictions of consenting sex than rape. Convicted rapists, meanwhile, have shown high and about equal arousal to depictions of consenting sex and depictions of rape. However, rapists have also shown higher arousal to rape depictions that contained greater aggression than to rape depictions with less aggression (Abel, Barlow, Blanchard & Guild, 1977; Abel, Blanchard, Becker & Djenderedjian, 1978; Barbaree, Marshall & Lanthier, 1979; Abel, Becker & Skinner, 1980; Quinsey, Chaplin & Varney, 1981; Quinsey, Chaplin & Upfold, 1984).

An interesting further finding of this line of research is that the sexual arousal of nonrapists to rape depictions can be inhibited by previous exposure to depictions that clearly emphasize the victim's suffering and repulsion (Malmuth & Check, 1980; Malmuth, Heim & Feshbach, 1980). When nonrapists were presented with depictions that differed on the victim's reaction, their self reported arousal and arousal measured by penile tumescence to later rape depictions differed significantly. Those who originally viewed the repulsed victim showed lower arousal than those who viewed the aroused victim.

It is also worth noting that, judging from clinical reports, the perception of the victim as having been willing or eventually sexually aroused by their assault appears to be a common theme among sex offenders regarding incidents of sexual assault which they committed. Gager and Shurr (1976) and Clark and Lewis (1977) have reported that many rapists have justifications or excuses for their actions, and are often able to portray their actions as understandable in light of the situations in which they found themselves. Investigating this justification process further, Scully and Marolla (1984) interviewed 114 convicted, incarcerated rapists and found that a sizable proportion maintained that the victim enjoyed being raped, even in cases where considerable documented harm to the victim could be found. Obviously, these reports must be interpreted with a great deal of caution, especially given the retrospective, qualitative research designs used. Whether the theme of victim arousal is an indicator of a possibly socially acceptable post-hoc justification or an attitudinal precursor to action cannot be determined. These reports are worth noting here only because they show the consistency with which the theme of victim arousal arises as a key factor qualifying the vicious nature of sexual assault.

Finally, it is important to emphasize that the findings regarding the salience of victim arousal for sexual arousal and the demonstrated effect of this factor in altering attitudes toward rape corresponds to psychological theory. Relying on theories of judgmental processes (Higgins, Rholes & Jones, 1977; Wyer & Sroll, 1981; Kahneman, Slovic & Tversky, 1982), it is possible to see how perceptions of victim's reactions

could become highly influential in the formation of thinking patterns about the acceptability of sexual coercion. Presentation of sexual violence as a precipitant of victim arousal could either serve as the groundwork for a reorientation of sexual attitudes or as a reference belief that becomes influential in certain situations.

The first potential process of attitude reorientation is rather straightforward. Depictions of sexually coercive scenes have the capacity to be arousing to a variety of individuals, but this arousal sequence can be inhibited in many by the perception that such incidents are really more harmful than sexually arousing to the victim. The perceived outcome of any social action is a powerful factor in determining whether an individual might consider himself likely to engage in that behavior. As a result, portrayal of sexual coercion as producing positive outcomes (in the form of sexual satisfaction for both parties) could negate possible inhibitory influences and instead produce a powerful conditioned pairing of sexual aggressive content and sexual arousal. Once this pattern of arousal has been established repeatedly, it is likely that an individual will alter the inhibitory attitudes to justify the existence of the link between his own perceived behavior (his arousal) and his processing of sexually violent material. In short, he will begin to believe that women actually get enjoyment out of sexual victimization because it is consistent with his own newly acquired arousal patterns.

A second possibility is that the portrayal of victims becoming aroused as the result of sexually violent coercion serves as a reference point that is easily accessed when situations similar to the ones portrayed are depicted or occur. In this formulation, an individual uses this general rule about victim reaction as an economical way of assessing the likely outcome of a situation in which there are several possibilities of uncertain probability. The scenes of sexual victims receiving pleasure may serve as an available orientation point when judging sexually coercive situations. Regardless of the factual or logical accuracy, what has been seen can become something to be weighed in any formulation of the likely outcome of future events. This easily accessible piece of memory could thus become influential in the expression of attitudes about these situations.

The line of research on attitude change regarding the acceptability of sexual coercion is a convincing one when place in its theoretical context. It is important to remain aware, however, that the observed attitude changes are generally restricted to exposure using depictions of sexually violent incidents in which the victim becomes aroused as a result of the attack. Attitude changes from exposure to violence or sexually explicit behavior alone are not consistently observed. In addition, the effects of such materials on women's attitudes is relatively unexplored, and the few studies

that do exist (e.g., Kafka, 1985) seem to point toward potentially different patterns of effects.

For reasons mentioned earlier, the effects of exposure to these materials on the attitudes of children and adolescents is an empirically open question. It is certainly reasonable to speculate, however, that the results of such exposure on less socially mature individuals with less real world experience to counteract any influences of this material would be equally (or more) powerful than those seen in college students. Attitude formation in childhood is a matter of exploration and "trying on" of potential world views. Being exposed to one in which sexual coercion produces positive results could likely influence adoption of attitudes condoning the use of sexual force as a reasonable alternative in intimate relationships.

**Acceptance of coercive sexuality
appears to be related
to sexual aggression**

This conclusion is based on primarily correlational (but some laboratory based and longitudinal) evidence of a link between attitudes indicating an acceptance of sexual coercion and the presence of sexually aggressive behavior patterns. The association between attitudes and behavior in this area is one of the most difficult to comment upon conclusively from social science evidence, but it is obviously a lynchpin of informed policy regarding the effects of exposure to pornography. At the present time, it appears that there is evidence that attitudes indicating acceptance of coercive sexuality are, along with a number of other variables, related to sexually aggressive behavior. While there is the possibility that these attitudes are causally related to the development of this behavior, it cannot be said presently that these attitudes are causally related to this behavior. Moreover, it is not clear that exposure to pornography is the most significant factor in the development of these attitudes. A review of the types of available evidence on this question should illustrate why this is a question that requires such cautious interpretation.

There are a limited number of ways that one can examine the relationship of certain attitudes to certain behaviors. First, people who have demonstrated a certain behavior can be assessed regarding their attitudes relative to other individuals who have not demonstrated the behavior. In the case of attitudes and behavior regarding

sexual aggression, this has mainly meant comparing the attitudes of rapists to those of nonrapists. An alternative strategy along this line has been to compare the attitudes of those who report having engaged in sexually coercive behavior to those who report no such involvement, regardless of whether such involvement resulted in an arrest. A second approach is to test whether these attitudes are related to specific expressions of aggression toward women in a controlled, laboratory setting. Third, and ideally, one can look at the development of attitudes and behaviors related to sexual aggression in the same individuals over time. In this way, the question of whether attitudes precede and/or help predict sexually aggressive behavior can be addressed.

The largest amount of information about the relationship of sexually coercive attitudes to sexually aggressive behavior has been collected using the first strategy; that of comparing the attitudes of groups with reported or demonstrated differences in behavior. As alluded to earlier, considerable clinical evidence exists that convicted rapists express beliefs that women are at least partially responsible for being raped or that a large number of women actually enjoy the experience (Gebhard, Gagnon, Pomeroy & Christensen, 1965; Gager & Schurr, 1976; Clark & Lewis, 1977; Wolf & Baker, 1980; Scully & Marolla, 1984). This difference is apparently not totally consistent, however, with some investigators reporting that rapists in their samples expressed views that were different from, but not dramatically at odds with, those expressed by convicted felons or members of the general population (Feild, 1978; Burt, 1978).

This lack of congruence of the above findings can probably be attributed to the different methodologies used in these investigations (qualitative analyses of interviews in the first set versus differences on questionnaires in the second set) and the effect of sample bias concerning the characteristics of incarcerated rapists. There is little reason to think that arrest for a sexual offense necessarily implies the presence of a homogeneous set of attitudes, and it is equally likely that such status implies a set of other social and personality characteristics (Koss & Leonard, 1984). Moreover, given the underreporting of sexual coercion, it is likely that any sample of normal subjects would be likely to contain a number of individuals who had engaged in some sexual aggression. As a result, differences in attitudes about the acceptability of sexual coercion could be masked in any examination of groups drawn with arrest as the primary selection criterion.

Other researchers, therefore, have looked at the relationship of attitudes about the acceptability of sexual coercion to self reported sexual aggression. Generally, these studies have administered scales assessing attitudes regarding rape myths or

sexual coercion to males (usually college students) and related these scores to either self reported likelihood to rape or self reported involvement in sexual aggression. A series of investigations (Malamuth, Haber & Feshbach, 1980; Malamuth, 1981; Tieger, 1981; Briere & Malamuth, 1983,) have shown a consistent relationship between a subject's attitudes toward the acceptability of the use of coercion in sexual relationships and the self reported likelihood to commit rape. These studies have thus demonstrated that the measures used to assess attitudes regarding acceptance of sexual coercion appear to have some validity when compared to another measure of an individual's overall view of the acceptability of sexual coercion.

Of more direct interest, however, are studies that have shown a relationship between attitudes about the acceptability of sexual coercion and self reported behavior regarding involvement in sexual aggression. For example, Koss, Leonard, Beezley & Oros (1985) found that attitudes toward sexual coercion and demographics provided a statistically significant model that predicted group membership between subjects classified as sexually assaultive, sexually abusive, sexually coercive, and sexually nonaggressive based on a sexual experiences survey. Similarly, Mosher & Anderson (1986) found significant correlations between components of a scale measuring what they termed a "macho" personality orientation (e.g., seeing danger as exciting or woman as submissive) and self reported activities of the use of force in sexual relations. Finally, in an elaborate test of several possible precursors to sexual aggression, Malamuth (1986) has shown that attitudes toward the acceptability of interpersonal violence toward women, hostility, and dominance interact with arousal variables and sexual experience variables to predict a subject's self reported sexual aggressiveness. Each measure alone did an unimpressive job of predicting the self reported activity, but a statistically significant model was constructed using the variables in an interactive fashion. Given the consistency of the results in these studies, it seems that favorable attitudes toward the use of sexual coercion are related to self reported likelihood of engaging in or having engaged in sexually aggressive behavior. As mentioned earlier, however, an unresolved issue is whether these attitudes led to different behavior patterns or whether the attitudes were adopted after the subject's behavior patterns were already established.

Another bit of evidence that bears on the relationship of attitudes and behavior regarding sexual aggression comes from laboratory studies that have examined the behavioral effects of exposure to sexually violent materials. Malamuth (1983) administered both the Rape Myth Acceptance Scale and the Attitude toward Interpersonal Violence Scale (Burt, 1978) and measured the sexual arousal to a rape depiction in a group of 42 male undergraduates. He later tested the aggressive behavior of these

males (using an aversive noise task) toward a female confederate as part of an independent experiment ostensibly related to ESP transmission. In the later phase of the experiment, subjects were angered deliberately by the confederate in order to precipitate aggression. Structural modeling of the results showed that a model predicting separate contributions for both arousal and attitudes best reflected the regularities seen in the data. Taken together, arousal and attitude scores accounted for 43% of the variance in the aggression measure. Malamuth and Check (1982) report that these results have been replicated and that a General Attitude toward Violence scale did not contribute significantly to the overall solution, leading these investigators to posit that attitudes specific to the use of coercion with women accounts for the observed laboratory aggression.

Another study that has shown an association between attitudes about the acceptability of violence toward women and the expression of aggressive behavior in a laboratory has been done by Donnerstein (reported in Malamuth & Donnerstein, 1984). In this investigation, male undergraduates were a.) either angered or treated in a neutral manner by a female accomplice, b.) exposed to either erotic, aggressive, or sexually violent films, c.) tested for their attitudes regarding their willingness to use force in sexual relations, their willingness to commit rape if they would not get caught, and their acceptance of rape myths (using the Rape Myth Acceptance scale), and d.) finally given the opportunity to aggress against the female confederate in a laboratory task involving the administration of shock to promote learning. Both attitudes and aggressive behavior were shown to be most affected by the exposure to the sexually violent film, less affected by the aggressive film, and least affected by the solely erotic film. This investigation demonstrated that similar effects for attitudes and behavior appear to occur from exposure to films of a sexual and violent nature.

Up to this point, evidence has been presented that attitudes about the acceptability of sexual coercion appear to be rather prevalent in individuals who have either been convicted of rape or admit to incidents of sexual aggression, and that these attitudes appear to be positively related to statements about the likelihood of engaging in rape and the expression of aggressive behavior toward women in a laboratory setting. What is missing from this picture is clear evidence that these attitudes cause the behaviors of interest. In order to be confident that attitudes are precursors rather than results of sexually aggressive behaviors, we would have to see the development of these attitudes precede the expression of these behaviors in the same individuals.

Longitudinal research on this issue is sparse, however, and offers little in the way of clarification of this critical issue. In a study done by Alder (1985), attitudes legitimizing sexual aggression toward women were found to be one of three factors

(including presence of sexually aggressive friends and service in Vietnam) that significantly predicted self reported sexual aggression. These data were taken from a longitudinal study of 239 randomly sampled youth in one county in the Pacific Northwest, but the data linking attitudes and self reported aggression were all taken at the last sampling time when the subjects were 31 years old. Although this study is from a longitudinal investigation, the results regarding the relationship of attitudes and behavior are contemporaneous. As a result, it must be stated that these findings only show that attitudes and behavior tend to coexist; a verification of earlier research but not a causal finding.

The only study that appears to have been able to actually assess the relationship of attitudes and naturalistic sexual aggression over time is that of Ageton (1983). Using several hundred youth from the National Youth Survey of self reported delinquency, Ageton isolated a sample of males who reported incidents of sexual aggression and analyzed responses to particular questions regarding sexual attitudes and behavior over the five year time frame of data collection. In these analyses, involvement in a delinquent peer group appeared consistently as the most powerful factor related to reported sexual aggression. In one analysis in which previous attitudes, behaviors, and reported group involvement were tested for their ability to discriminate later sexually assaultive behavior, attitudes toward rape and acceptance of interpersonal violence toward women did emerge as a statistically significant addition to the discriminant function. In other words, presence of these attitudes did appear somewhat related to the expression of sexually aggressive behavior two years later.

It is important to note, however, how marginally distinctive the contribution of this attitude factor really was. Involvement with delinquent peers alone was able to account for 76% of the variance in the self reported later sexual aggression, and inclusion of the three other factors (of which attitudes was one) accounted for an additional 1% of the variance. As Ageton (1983, p.119) was forced to conclude...

"The idea that sexual-assault offenders are influenced strongly by stereotypic views of rape and sexual assault, traditional sex-role attitudes, and liberal beliefs about the use of violence was not borne out in these analyses. None of these variables consistently differentiated the offenders and the nonoffenders in the annual comparisons. Furthermore, in the initial discriminant analyses, only the measure of rape attitudes contributed to the separation of the groups. Clearly it is not a critical factor, however, since its absence in the discriminant analysis involving just delinquency variables had little effect on the accuracy of

the classification. Although we do not deny that the constellation of beliefs about male and female roles, behavior, and sexuality may influence sexual acts, the data do not indicate that such attitudes play a major role in predicting sexual assault."

In the end, the clarity of the causal link between pre-existing attitudes and later sexual aggression has yet to be demonstrated.

The fact that this direct link has not yet been demonstrated can be seen as at least partially the result of the difficulty isolating the effects of attitudes clearly in any longitudinal or cross-sectional research design. In the Ageton study, for example, it is very difficult to determine where the effect for peer association ends and the one for attitude begins. Attitudes are obviously related to one's choice of friends in an intricate fashion, and disentangling these two constructs is difficult within one study. There is some longitudinal evidence from related areas that attitudes can be important interactive variables combining with identification with television characters in producing peer-related aggression in children (e.g., Huesmann, Eron, Klein, Brice, & Fischer, 1983) or with personality and behavioral characteristics in producing anti-social behavior in adolescents (e.g., Jessor & Jessor, 1977). However, in these cases, as in the case of the effects of pornography, the independent effect of attitudes has not been shown to be large or direct.

Although there is an association between acceptance of coercive sexuality and sexual aggression, the difficulty comes when we attempt to assign a strict causal interpretation to this association. From one perspective, it is quite logical that favorable attitudes toward sexual coercion should be more prevalent in individuals judged to be more sexually aggressive if we expect one's attitudes to be consistent with one's behavior. At present, however, it cannot be stated conclusively that attitudes favorable to sexual coercion produce sexual aggressiveness. These two appear together, and the exact mechanisms of causation and strength of relationship between them has yet to be determined.

In laboratory studies
measuring short term effects,
exposure to violent pornography
increases punitive behavior toward women

An increase in aggressive behavior toward women has been proposed often as one like-

ly effect of exposure to pornography, but there does not seem to be sufficient scientific support for a generalized statement regarding the presence of this effect. There is no paucity of hypotheses about how exposure to pornography and aggression against women may be related. For example, men predisposed to aggression who are aroused by pornography may translate this increased arousal into targeted aggression; attitudes or restraints toward aggression might be changed in pornography viewers, increasing the chance that they would act aggressively; or, certain behaviors of the film victims (e.g., saying "no") might take on cue properties for aggression, promoting aggressive behavior in men toward women who display these behaviors. The limited statement above, however, reflects the circumscribed links between exposure to pornography and aggression toward women that have been scientifically demonstrated.

Testing for this effect in a natural setting is clearly impossible. It would be unethical to expose persons to pornography and then observe their level of aggression toward those encountered outside of the laboratory. A series of investigations have been done in the laboratory, however, that examined this effect in analogue situations. The first experiments found that sexually aggressive films caused more punitive behavior than sexual nonaggressive films. Further investigations indicated that the outcome depicted in the sexually aggressive films created different levels of punitive behavior. In order to tease apart the effects that the aggressive and sexual themes of the films had, investigations into the effects of nonsexual aggressive films were then pursued.

Aggression in recent laboratory studies is usually represented by the "Buss paradigm" (Buss, 1961). Subjects are told that they and a second subject (actually a confederate of the experimenter) will be involved in a learning experiment. After exposure to the pornographic material, the subject is instructed to choose and administer one of several possible levels of shock or aversive noise when the confederate (who is out of the sight of the subject) makes an incorrect answer. Higher levels of shock are taken to represent higher levels of punitiveness or aggressiveness. In some experiments, the confederate angers the subject before exposure to the pornography by reacting derisively to an opinion expressed by the subject.

This paradigm as an analogue for aggression outside of the laboratory has been criticized on several grounds. The most general criticism has been that the lab task is not an appropriate representation of aggression. However, there has been some (albeit circuitous) evidence for behavior in the Buss paradigm as an adequate analogue of sexual aggression: Subjects who report higher levels of sexually coercive behaviors also score higher on scales designed to measure beliefs in rape myths and acceptance of sexually coercive behavior (e.g., Briere & Malamuth, 1983; Tieger, 1981), and subjects scoring higher on these scales have provided higher levels of shock in the Buss

paradigm (Malamuth, 1983). These results indicate that there may be a link between aggression on the Buss paradigm and reported likelihood to act in a sexually coercive manner. How well this lab task and actual aggression, rather than attitudes, are related is still an open question.

Two other criticisms regarding this design are common to many lab studies. The first is that the subjects provide shocks because they believe that the experimenter wants them to do so. The assumed effect of this belief is that the subjects appear more aggressive in the laboratory than they are outside. A final criticism is that the responses allowed the subject are more limited than, and not representative of, those that are available outside of the laboratory. Some experimenters allow other responses (such as rewarding the other person), yet even then the subject's choices are unrealistically constrained. While these two criticisms may be valid when generalizing from behavior within to that outside of the laboratory, they do not appear to account for differences between groups within the laboratory (see Kafka, 1985, for a more detailed critique).

Several studies have used this general approach to aggression research to examine the effects of sexually aggressive films, nonsexual aggressive films, and sexual nonaggressive films on laboratory behavior. In the first of two experiments, Donnerstein and Berkowitz (1981) first had a male or female confederate anger a male undergraduate, and then showed these subjects a film of either a neutral talk show, an erotic nonaggressive scene, a sexually aggressive scene in which the female finally enjoys being aggressed against, or the same sexually aggressive scene with the woman continuing to abhor the aggression she experiences. Immediately after the films, the subjects administered shocks or rewards to the confederate who had angered them earlier.

The amount of punitive behavior exhibited by those paired with a male confederate did not change significantly regardless of the type of film seen. Those paired with a female confederate, however, provided more punishment after viewing either of the sexually aggressive films compared to the erotic or the neutral film, even though the erotic and sexually aggressive films were equally arousing. There was no difference in punitive levels between those viewing the erotic film and the neutral film. The results paralleled an earlier study by Donnerstein (1980).

This experiment showed that punitive behavior is increased in angered subjects after watching sexually aggressive films. The authors concluded that it was the modeling effects of the association of the female confederate with the female victim in the film, rather than heightened arousal, that caused aggression against the female and not the male confederate. This conclusion is strengthened by an earlier study by Donnerstein and Hallam (1978) in which nonsexual violent films that consisted of male

to male violence caused more punitive behavior toward male than female confederates. The authors also concluded that the aggression depicted in the film lowered the subjects' inhibitions against aggressive responses. Since the erotic nonaggressive film did not show the aggression toward a female, it did not lower inhibitions and therefore did not increase punitive responses after viewing.

The finding of no difference in punitive behavior for the different types of sexually aggressive films did not seem logical to these investigators. Previous attitude research (see Malamuth, 1984) had shown a differential effect for depictions in which the victim was aroused versus those in which the victim was not aroused, and it seemed that this factor might also be influential in experiments with punitive behavior as an outcome. A second study was thus undertaken to explore this possibility further. The procedures were the same as in the first experiment, except that all of the confederates in this experiment were female and only half of the subjects were angered. This allowed for a test of the interaction between the anger manipulation and the type of film seen. As before, the neutral and erotic films were followed by similar levels of punishment. Those previously angered provided significantly higher punishment following both sexually aggressive films, while those not previously angered provided significantly higher punishment only to the sexually aggressive film in which the woman portrayed a positive outcome.

However, this experiment also showed that the outcome of the sexually aggressive films (i.e., whether the victim is aroused) interacts with the emotional state of the viewer in the production of punitive behavior. For angered subjects, both sexually violent films had the same (increased) effect on punitive behavior. For the non-angered subjects, only the film with the aroused subject resulted in higher punitive behavior. The authors concluded that all those watching the sexually aggressive film with the aroused victim had their inhibitions lowered by seeing the males' sexually aggressive behavior in the film eventually result in a positive outcome for both the attacker and the victim. The aggression of those watching the aggressive film with the repulsed victim, however, was affected by their previous angering. Those who were previously angered were predisposed to hurt someone and consequently reacted to the pain cues of the victim with heightened aggression; those who had not been angered did not react to the pain cues of the victim, nor were they less inhibited since the outcome of the film indicated a negative outcome of the male's aggression. An untested implication of this conclusion may be that those who find the negative outcome of these films (i.e., a victim's pain) to be pleasurable would be more aggressive following the film.

In two later studies, Donnerstein (1983, 1984) investigated the unique effects of the aggressive and sexual components of sexually aggressive films using a nonsexual aggressive film, a sexually aggressive film, an erotic nonaggressive film, and a neu-

tral film. As had been shown earlier, with male confederates, the type of film did not affect the intensity of the shocks that previously angered male undergraduates delivered. The levels of shock intensity delivered to the female confederates were similar following the neutral and nonaggressive erotic films, were significantly higher following the nonsexual aggressive film, and were highest following the sexually aggressive film. The study shed light on the role of arousal in producing laboratory aggression. The nonsexual aggressive film was less arousing than either of the sexual films, but produced aggressive behavior. The highest level of aggressive behavior, however, was produced by the sexually aggressive film. Arousal, therefore, did not appear to be a necessary condition for the production of aggression, but when paired with exposure to aggression (as in the sexually aggressive film), the arousal appeared to add significantly to the level of lab aggression produced.

As a group, these studies consistently indicate a relationship between type of film and the intensity of shocks delivered immediately after the film is viewed. Films that contain aggression or sexual aggression are associated with higher levels of shock to a confederate of the same sex as the person aggressed against in the film. These results consistently show that nonaggressive sexual films are associated with similar levels of shock as nonsexual-nonaggressive neutral films.

It should be noted, however, that the findings about sexual nonaggressive films in these studies are not consistent with earlier studies where previously angered subjects reacted punitively following sexually explicit, nonaggressive films (e.g., Meyer, 1972; Jaffe, Malamuth, Feingold & Feshbach, 1974; Donnerstein & Barrett, 1978; Donnerstein & Hallam, 1978). Donnerstein and Hallam (1978), however, found that male subjects rated erotic films chosen for their nonaggressive content as 2.5 on a 5-point aggression scale. This suggested that the subjugation of the women in the film may have been interpreted as aggression, facilitating later aggression from the subjects. It may be, then, that the perceived aggressive content of the nonaggressive erotic films was varied across these studies, thus producing contradictory results.

Other studies have investigated the effects of variables that might mitigate the effects that sexually aggressive films have on punitive behavior, and the length of the effects that sexually aggressive films may have on punitive behavior. Malamuth (1978), for example, had male undergraduates read passages containing either aggressive pornography, nonaggressive pornography, or neutral stimuli. After being angered by a female confederate, subjects were given the chance to aggress against her using electric shocks. Before delivering the shocks, half of the subjects read a passage designed to make them more self-conscious about delivering the shocks (an inhibiting communication), while the other half read a passage suggesting that it was permissible to give as strong shocks as they wished (a disinhibiting communication). Shock intensities delivered were similar for all males who read the inhibiting communication,

regardless of the pornographic passage read. More intense shocks were given following the aggressive than the nonaggressive pornography in the group who read the disinhibiting communication. In contrast to other studies, however, the levels of shock intensity given after the neutral film were between those of the two pornographic films, and were not significantly different from either. Malamuth offered no explanation for this conflicting result, but did state that the results indicated that internal states or external situational variables can have a significant effect on behavior following exposure to pornography.

One important influence may be previous exposure to pornography. As part of a larger project, Zillmann and Bryant (1984) assigned male and female undergraduates to see varying amounts of nonaggressive pornography one day a week for six weeks. At the end of the exposure period, members of each group saw one 8 minute film of either nonaggressive sexually explicit material, sadomasochistic material, bestiality, or were included as a no-exposure control subject. Subjects were then allowed the opportunity to inflict pain via a blood pressure check, upon a confederate who had just inflicted pain upon them in the same way. Those watching the sadomasochistic and bestiality material inflicted more pain than those watching the erotic material, who inflicted more pain than those in the no-exposure control group. However, for those with the massive previous exposure to nonaggressive pornography there was no difference in aggression across the four final stimulus conditions. It appeared that the prior exposure mitigated the effects of viewing the final films.

Malamuth and Ceniti (1986) investigated the length of these behavioral effects. They exposed male undergraduates to either sexually aggressive pornography, nonaggressive pornography, or a control condition of no exposure. Each of the exposure subjects saw two full-length films each week for three weeks, and were then given two book chapters portraying sexual activity to read during the fourth week. One week after the exposure period the subjects were involved in an ostensibly separate experiment purporting to measure the effects of punishment on an ESP task. The results indicated that there were no significant differences in punitive behavior related to type of film exposure.

These findings may indicate that the behavioral effects found by Donnerstein following sexually aggressive films do not last for a week. However, study differences regarding type of learning task presented to induce aggressive behavior may also explain the differences in results. While Donnerstein's experiments involved the confederate learning material independently of the subject, Malamuth and Ceniti had the subject "send" the message to the confederate. A lack of punitive behavior on the part of the subject may have been at least partially influenced by doubt that he had been successful in his part of the task. Also, Malamuth and Ceniti did not question the

no exposure control group about any sexually aggressive or erotic films that they saw on their own during the exposure phase of the experiment, and the overall film viewing of the three groups may have actually been quite similar even though the experimental exposure conditions were different. Because of these differences, it is difficult to draw conclusions about the length of any effect on behavior produced by these experimental manipulations. At present, it is known that these effects can be produced in the lab, but how long they last is still in question.

In summary, published studies have consistently indicated that punitive behavior can be produced within the confines of the laboratory by the viewing of sexually aggressive and aggressive films. This observed pattern of results fits well with previously tested psychological theory concerning the effects of modeling, with heightened aggressive behavior seen following the modeling of such behavior in films. The more closely the confederate in the experiment is aligned with the victim in the aggressive film, the more aggressive the behavior toward the confederate is. Of equal interest is the fact that arousal also appears to be an influential element in producing this behavior, having both a separate and combined influence with modeling. Sexual aggressive films produce more aggression than do less arousing nonsexual aggressive films. In addition, previously angered subjects (i.e., more aroused) show more aggressive behavior than nonangered subjects.

Several questions about the widespread nature of this phenomenon remain. For example, the relative effects of modeling and arousal across individuals has yet to be explored. Also, the duration of these effects for producing aggressive behavior is unknown and it is important to remember that only immediate effects have been shown. Similarly, the effects on behavior outside of the laboratory, where behavioral choices are much more varied and where there are additional inhibiting and facilitating factors on behavior, are unknown.

On one hand, these data could be viewed with concern, since they show changes from little exposure; after one exposure to a sexually violent film, men are more aggressive to women. On the other hand, there is no evidence that those viewing sexually aggressive films under more normal circumstances have become more aggressive immediately after the films are viewed. Reports of this causal relationship being a noticeable one in the real world have not emerged consistently (Byrne & Kelly, 1984). In sum, these experiments should heighten concern that aggressive behavior toward women may be increased by viewing aggressive and sexually aggressive films, but presently this effect has only been seen in controlled and potentially artificial laboratory settings.

Summary of Consensus Statements

The preceding statements reflect what the Workshop participants believe can confidently be said regarding the effects of pornography. Pornography has been consistently linked to changes in some perceptions, attitudes, and behaviors. These links, however, are circumscribed, few in number, and generally laboratory-based. To say that this means that any observed effects are *artifactual*, however, would be an error. Pornography does have effects; it is just not yet known how widespread or powerful they really are. There is a clear lack of extensive knowledge or unifying theory, and global statements about the effect of exposure to pornography have not yet been substantiated. Currently we have bits of knowledge about the effects of pornography; future research is required to unite these bits into a more comprehensive statement.

While convincing evidence exists about the effects of pornography on perceptions, attitudes, and behavior, it is important to remember that the relationships between measured perceptions, attitudes, and behaviors themselves are unclear. They are not necessarily linked in a straight causal pathway. For instance, while it is a common belief that attitude changes lead to behavioral changes, research has consistently shown otherwise. Behaviors are as likely to influence attitudes as attitudes are to influence behavior. As a consequence, conclusive statements about the extent to which attitude or perceptual changes brought about by pornography are ever reflected in changed behavior are not currently possible. This absence of clear information does not argue for dismissal of the hypotheses that perceptions about the frequency of uncommon acts influences attitudes or that attitudes toward sexual coercion promote sexually coercive behavior; it only argues that there is not a clear causal link yet demonstrated. Indeed, the evidence of the coexistence of the very attitudes that are shown to be affected by sexually violent pornography and self-reported or verified sexual aggression is an association that warrants concern and continued investigation.

There is substantiation for the basic concern that sexually violent material has more consistent and marked effects than nonviolent erotic pornography. Attitudes condoning sexual coercion have been fostered by materials combining sex and violence, particularly those in which sexual assault eventually produces arousal in the victim. Increases in punitive behavior toward women in a laboratory setting have also

been observed after exposure to sexually violent material. Although the findings regarding the unique effects contributed by the violent and the erotic material have not been fully elaborated, their combination has repeatedly brought about attitudes and behaviors which are considered to be antithetical to the aspirations of our society.

There is clear evidence that youth involved in the production of pornography are adversely affected by their participation. It is unreasonable and contrary to reported experience to think that such sexual victimization will not leave its mark on these children as they attempt to forge a social image of themselves. Programs to stop the production of child pornography and to intervene with the children involved in its production are clearly needed to forestall these consequences.

Summary of Effects on Children

As has been noted throughout this report, because of ethical concerns it is impossible to directly test for effects of pornography on children and adolescents. As a result, research on effects of exposure has been done almost exclusively on college students in late adolescence. Estimating the extent to which these effects can be generalized to children and young adolescents is a complex process, requiring interpretation and integration of knowledge regarding child development. This task is beyond the scope of this section, but a few caveats could be helpful.

As children mature they develop new cognitive and emotional skills, and their interests shift. As a result of these changes in basic understanding and orientations, the message that an 8- or 12- or 16-year-old would get from a certain pornographic movie may be quite different from that of an 18-year-old. In addition, relationships to family and peers undergo considerable change in the ten years between 8 and 18, meaning that the mediating factors on any effects will also shift during this developmental period. Finally, there is the likelihood of a "cohort effect" interacting with normal patterns of development. Growing up in the 80's is different than growing up in the 60's, and sociohistorical changes can affect the rates of many things from juvenile crime to views of interpersonal relationships.

These simultaneously changing factors make it extremely difficult to predict the exact effects of particular influences on children. Reasonable prediction can really only be done regarding influences that would be so powerful as to exert marked negative or positive effects in spite of shifts in other influences. Repeated physical

abuse of a child, for example, could clearly be stated to produce significant negative effects regardless of shifts in other factors in the child's life. It is likely, however, that exposure to pornography is in that vast grey area of influences that will probably not be shown to act so strongly as to be consistently harmful independent of changes in the child and the social situation.

There are certain changes in the child, however, that are rather predictable and probably important in mediating the effects of exposure to pornography. Many developmental psychologists believe that around the age of 12 or 13, children acquire many of the basic thinking processes that they will use, with refinements brought about through experience, throughout the rest of their lives (e.g., Colby, Kohlberg, Gibbs & Leiberman, 1983). Usually by this age, children are able to understand social causation and the idea of reciprocity in interpersonal and social relationships. If this is the case, one might expect that the effects of pornography on those 12 years or older would be generally similar in quality to those seen in 18-year-olds.

A host of other factors, however, could magnify or reduce these effects. For example, it is possible that the effects could be magnified in those who are 12 years old since they do not have the number of life experiences against which they can compare the contents of pornography in order to determine its accuracy. On the other hand, young adolescents may not be as interested in the sexual activity of the pornography as older adolescents, and their resulting lowered attention may reduce the effects of viewing the pornography. Unfortunately, the exact direction or magnitude of differences resulting from factors such as these between young and old adolescents is largely a matter of speculation. What does seem worthwhile speculating further upon and investigating, however, is the general question of the effects of cognitive level and an adolescent's attributional framework regarding social relationships as mediators that increase or decrease susceptibility to pornography exposure.

Speculating about the effects on children less than 12 years of age is even more of a problem. Younger children think in a qualitatively different manner from those on whom research regarding the effects of pornography are done. In addition, the focus of interest may be quite different in those who have not completed the emotional and physical changes that accompany puberty. The fear of some is that the sexual and emotional patterns to be followed by these children when they are grown will be "imprinted" on them by seeing pornography at a younger age. Others believe that young children are less affected since they do not have the cognitive or emotional capacities needed to comprehend the messages of much pornographic material. Again, though, we really do not know which of these statements is more accurate, and each of them may be accurate for specific individual children.

A final factor that makes extrapolation of these results to children troublesome is that the susceptibility of children to a variety of influences has been shown to vary widely. Children bring individual temperaments and adaptive skills to situations, and the predictability of how particular influences will affect a child is lower than we might expect. Children are amazingly resilient to a number of influences, and the exact causes of this resilience are not clear (Kagan, 1985).

In the end, then, it is really rather difficult to say much definitive about the possible effects of exposure to pornography on children. The direct research is not present, and probably never will be. There are reasons to believe that the effects seen in older adolescents would probably generalize to younger adolescents as well, but we know little about the possible mediators of these effects that may be different in younger adolescents. Finally, effects on younger children are very difficult to determine, given their malleable and adaptive natures.

FUTURE RESEARCH AGENDA

As indicated by the previous statements, social science has provided conclusive evidence about only a few of the possible effects of pornography on children, adolescents, and adults. Much remains unknown. If researchers are to make a substantial contribution to future policy decisions in this area, exploratory applied studies about the effects of pornography in everyday life and laboratory studies clarifying the theoretical mechanisms related to exposure must be done.

The fact that much still needs to be done in this area is not too surprising. For one thing, research into the effects of pornography has occurred primarily over only the past 15 years. Several questions, such as the effects of prolonged exposure or the effects of sexually violent materials, have only very recently been investigated. In addition, numerous related studies, rather than any one dispositive study, must be pursued. Many questions in this area cannot be addressed directly because of ethical constraints, and investigations of a somewhat tangential nature must be done instead. Converging evidence from many tangential studies using different methodologies must then be related before conclusive statements can be made confidently.

Delineating which studies should be undertaken was the task of a second consensus session of the Workshop, and a far-reaching agenda for future research was devised. Time constraints prohibited the development of specific research designs, but selected areas that require more investigation were isolated. It is hoped that researchers will use this formulation of needed research as a set of general guideposts in designing specific research questions and approaches.

The agenda laid out here requires both field and laboratory studies, and there is considerable advantage to pursuing questions in this area using both strategies simultaneously. Certain leads that have come from laboratory investigations (e.g., the distinct effects of violent sexual material) now need to be examined in more realistic settings. Conversely, certain real world phenomenon of interest (e.g., habituation to exposure) must be fleshed out theoretically by systematic laboratory investigations. Overall, this area of inquiry is in an ideal position to advance if methods are tailored to existing questions rather than vice versa and an active exchange is fostered between laboratory and field researchers.

The extent to which any of this research agenda can be accomplished will depend on the willingness of private foundations and various government agencies to provide funding. A number of the proposed investigations (particularly longitudinal studies and those that require large numbers of paid subjects) could be quite expensive. Given the clear need for more information on this topic, however, the amount of funding provided for research will reflect the priority that society places on addressing the effects of pornography.

Definitional Issues

The term pornography has been used in so many ways that its meaning has become increasingly ambiguous. Researchers and policy makers alike may be thinking of a wide range of materials when trying to speak in common terms regarding pornography. The inevitable confusion resulting from these differing interpretations hampers the design and interpretation of social science research as well as the application of knowledge to policy.

More descriptive studies regarding the existing types and prevalence of certain materials and survey research regarding people's implicit categorizations of pornography are needed. This information is central to the development of a usable typology of pornographic materials to guide research and discussion. Standard descriptive terms for the various types of pornography that take into account the levels of sexual explicitness, violence, and types of participants would be a starting place in this effort. A subsequent, more involved approach would be to develop dimensions or axes along which different types of materials could be characterized in a multivariate fashion. Regardless of the exact form such a typology takes, however, it is essential that it both reflects the range of materials found in the marketplace and has theoretical relevance to social scientists and policy specialists.

Clear definitional boundaries are particularly needed across the range of sexual activities between completely mutually consenting sexual activity and rape. The fact that depictions of rape seem to have particularly powerful effects in controlled research studies and the problems with estimating the incidence of rape both highlight the need to focus on this content area in efforts at definition. Questions such as the extent to which certain activities (e.g., expecting sex as part of an unequal status relationship) fit the definition of coercion need to be discussed and debated.

Production, Distribution, and Consumption of Pornography

More accurate information regarding the production, distribution, and consumption of pornography is needed to focus research onto topics of real world relevance and to target prevention and intervention programs. Currently, information regarding the amount of various types of pornography being produced and used is sparse and often contradictory. Widely varying estimates can be found about the amount of production, the numbers of children and adults involved in production, and the number of consumers. Patterns of use are not any clearer, and accurate information about the extent to which certain types of pornography are used by different groups of children, adolescents, and adults is needed.

Information regarding typical consumption patterns of children, adolescents, and adults is particularly critical to future theoretical and applied research. Of most concern are the effects resulting from long term, repeated exposure occurring in contexts that promote unfavorable reactions in children, adolescents, or adults. Knowing how much is too much or what conditions are critical to changes in attitudes or behavior are questions that cannot be posed meaningfully until the parameters of current patterns of use are clarified. Descriptive studies in this area should provide information about the most popular type of pornography among different age groups, the reasons for its popularity, the amount that it and other forms of pornography are viewed, and the environment and context in which it is viewed.

Developmental Patterns

Research has indicated that individuals have different patterns of reaction to sexual and aggressive material. Abel and his colleagues, for instance, have shown that rapists are aroused by aggressive material more often than nonrapists, and that pedophiles are aroused by sexual material involving children. Exactly how these arousal patterns develop, however, is still rather unclear. We are unaware of, and need to know more about, the timing and mechanism of this area of development.

There needs to be careful longitudinal research on the role of early development and of later experience in the shaping and changing of these patterns. There is little doubt that pornography has different effects on different people and that a majority of sex offenders make regular use of these materials. The next problem to address is the one regarding how these patterns of use and sexual arousal are intertwined in the developmental process.

Related to these developmental questions are other important questions about propensity to commit sexual aggression and the role of pornography in activating that propensity. Malamuth, Check, and Briere (1986), for example, found that some college students' arousal to scenes of aggression was similar to the arousal observed in rapists, but these students did not report engaging in any sexually coercive behavior. If arousal patterns develop early and if certain patterns would seem to place an individual at risk for being sexually coercive, it is important to also explore the reasons why some individuals who would seem to be at risk do not exhibit sexually coercive behavior. The way that sex education can affect development and sexual expression should be investigated as part of this effort. This information would have direct applicability to the prevention and treatment of sexually coercive behavior as well as theoretical relevance to the understanding of the mitigation of arousal.

Increased general theoretical work on the link between sexual and aggressive behavior would also be of value in providing a larger framework for these focused studies. Several theories have been proposed that link sexual and aggressive behavior (e.g., Barclay, 1971). Questions remain, however, about whether aggression enhances sexual desire or sexual arousal in anyone, everyone, or some particular set of people. A clearer understanding of any link between these two general energies or behaviors would provide a structure that could facilitate the interpretation of specific findings about effects of exposure to sexually aggressive materials and arousal patterns.

Stability of Observed Changes

Further laboratory research is warranted to replicate and extend the existing lines of investigation on the effects of pornography on perceptions, attitudes, and behaviors. Replication of previous studies would add credence to (or call into question) earlier findings and clarify the potential for generalizing from these results. Most directly, inclusion of subjects from segments of the population that have not been closely examined (e.g., women, nonstudents of college age, those older and younger than college

age) in replication studies would be important steps in determining how far we can extend the findings of earlier research.

Also, the duration of behavioral and attitudinal changes seen in the laboratory needs to be more clearly determined. Almost all of the investigations done to date have been concerned with immediate changes, and the susceptibility of any of these changes to mitigating life influences over time is still basically unknown. Although presenting many ethically thorny issues, this question is central to knowing how much significance should be given to the series of present findings. If these effects appear to be rather stable, the issue of the effects of pornography takes on increased social importance; the effects become more than just the short-term results of a clever research design manipulation.

The effects of nonviolent sexually explicit pornography is another question that laboratory studies should continue to investigate. While the behavioral effects immediately following sexually violent pornography have been consistent, those following nonviolent sexual films have not been consistent. Further investigation in this area could contribute to the development of theory about the aspects of the pornographic presentation or viewing context that interact to produce harmful effects.

Habituation

Research by Zillmann and others has indicated that those who watch pornography on a regular basis in a laboratory setting eventually become less aroused when they see it; they become "habituated" to the pornography. This habituation, however, appears to be limited to only the type of pornography that they have been watching. Subjects' arousal returns to earlier levels when they watch a new type of pornography.

This phenomenon has been investigated in only a few studies, but it should be analyzed further because of its potential importance for our understanding of long term use of pornography. It is possible that this mechanism is an important aspect of a process by which certain individuals become interested in more deviant forms of pornography. If regular users do tire of particular types of pornography, they may be more inclined to seek out more uncommon pornography in order to maintain enjoyable levels of arousal. One of the implications of this hypothesized process could therefore be that the ready availability of pornography could habituate users on a grand scale, contributing to an increasing spiral in the deviance portrayed in new pornographic ma-

terials. On the other hand, habituation may make many individuals use pornography selectively or not use pornography extensively because of the awareness that its effects are short-lived. More deviant forms of pornography may just not be that intrinsically arousing and patterns of use may be altered to accommodate to the phenomenon of habituation. Regular users may seek intermittent exposure to the same type of material in order to achieve acceptable arousal.

Presently, we do not know how habituation works to promote different patterns of preference or use. In order to gain a fuller picture, more laboratory studies of the limits and mechanisms of habituation in different populations will have to be conducted. At the same time, it will be important to conduct field-based research of extensive users, focusing on how habituation affects selection of different types of pornography and the schedule of exposure.

Documentation of Natural Changes

Researchers should also attempt to capitalize on naturally occurring changes in viewing patterns or availability of pornography to assess simultaneous changes in potentially linked phenomena such as sexual assault or attitudes. Retrospective correlational studies of social indicators that have been done in this area are generally marred by their inability to rule out the possibility of mediating factors being responsible for observed associations. Examination of changes in the frequency of events in a small region over a time period during which the availability of pornography clearly increased at a particular point would make a stronger test of any association. For example, examination of behavior or attitude changes corresponding to the availability of cable television carrying pornographic movies would give more exact information than is presently available.

These studies could possibly use a variety of quasi-experimental methodologies, such as interrupted time series analyses or repeated observations of selected groups. What must be done in every case, however, is to anticipate a change in order to gain adequate baseline data before the level of availability increases or decreases. Such foresight and planning is necessary to add to the presently limited set of correlational studies on social indicators.

Attitude Research

The present body of studies on the effects of pornography on perceptions and attitudes warrant more elaborate investigation. We presently know that certain perceptions and attitudes toward sexual coercion can be altered in a laboratory setting by exposure to specific types of materials. It would be worthwhile to determine what other perceptions and attitudes might be affected by exposure and how the development of affected attitudes is linked to behavior.

The concern with attitudes toward sexual coercion has been primed by the relevance of this attitude formation process to our understanding of the subjugation of women and the etiology of sexual aggression. There is the possibility, however, that exposure to pornography also has an effect on the formation of other attitudes of interest. Attitudes toward such things as traditional family values or the attractiveness of one's partner (see, e.g., Zillmann, *in press*) may also be affected by repeated exposure, and changes in attitudes like these would be important to know about in order to assess the long term effects of viewing pornography on the quality of interpersonal relationships.

Of equal or even more importance, however, is the need to conduct longitudinal investigations regarding the development and influence of attitudes on sexual behavior. Longitudinal studies, similar to Ageton's (1983), that chart attitudinal changes in adolescents and adults over time, discuss any relationships of these attitudes and contact with pornography, and note any predictive value that these attitudes have regarding sexual behavior are critical. These studies will provide solid, rather than circumstantial, evidence about the effects of pornography on the development of attitudes toward sexuality and aggression and the effects of these attitudes on behavior. Such investigations would also allow for an understanding of the influence of certain contextual factors related to the effects of pornography on attitudes and behavior, such as whether the pornography is viewed alone or with others or how family interactions affect interpretation of this material. Without such investigations of the same people over time, researchers will only be able to continue speculating about the clarity and power of the relationships between pornography exposure, attitude formation, and behavioral expression.

Finally, continued research into the use of erotic stimuli for clinical purposes should be done. Clinical reports have indicated that pornography can be valuable in

treating sexual dysfunction or phobic reactions to sexual activity. In addition, research by Ceniti and Malamuth (1984) found that repeated exposure to violent or nonviolent sexual material lowered the arousal to rape scenes in a group of males who had been aroused by such material earlier. Possible uses that may be made of pornography in clinical settings, including the use of pornography to alter deviant sexual arousal patterns, may have much to offer in the treatment of those individuals who pose considerable threat to the community because of their sexual interests and behavior patterns.

Summary

Judging from the above agenda, researchers have a sizable challenge ahead of them in filling the gaps of existing knowledge regarding the effects of pornography. The research agenda laid out above, however, is not only extensive, but also one that will require work by investigators of different interests and methodological orientations. No one approach or disciplinary perspective will be able to provide the breadth of information required as background for a reasoned judgment on this issue.

A final point that is worth remembering regarding future research is that this line of inquiry really is in the initial stages of development, where much still needs to be described and conceptualized. As a result, researchers must be open to new ways of thinking about variables to be investigated. Particularly, thought must be given to the dimensions of pornography or the conditions of exposure that might be influential in producing harmful effects. As shown by the recent research with violent pornography and victim arousal, there may be specific qualities of presentations that are salient but not immediately evident if one is concerned only with the amount of graphic content presented.

The aspects of pornography that precipitate moral concern may not be the same aspects that are most influential in producing harmful effects, and investigators must keep this in mind in their initial choice of variables and designs. Researchers will do the most service to informed debate on this topic by searching for those dimensions of presentations and the processes of influence that are the most theoretically meaningful, rather than trying to prove or disprove the effects of particular types of offensive material. At this point, the aim must be one of building theory, and the applicability of a good theory will become obvious.

PREVENTION AND INTERVENTION

Introduction

A third Workshop consensus session focused on methods for mitigating the negative effects of pornography. Two general topics were considered: 1.) preventing the negative effects that have been shown or hypothesized to occur when children and adolescents view pornography, and 2.) providing intervention services to children and adolescents who are at risk for becoming involved or are already involved in the production of pornography. Achieving any success in either of these tasks will require the integrated efforts of individuals from several academic disciplines, the media industry, and government.

This section provides general ideas about prevention strategies in these two areas. There is no call for the abolition or censorship of certain materials. The question of banning materials was not considered an appropriate one for discussion by the Workshop participants, since it involves issues that go well beyond the scope of social science.

Instead, participants worked on proposing methods of prevention that could be usefully pursued under the assumption that pornographic materials will continue to be a possible influence on the development of children. Only general directions for programs can be presented at this time, however, and specific prevention programs will have to be developed according to the goals and resources of those involved in later efforts. Separate programs will need to be developed for youth of different ages and backgrounds, and the level of cooperation received from parents and professionals will obviously limit the types of strategies that can be pursued.

In this regard, it should be remembered that bigger, more elaborate programs do not always make better programs. There is such a dearth of information regarding prevention in this area that there is a great need for carefully evaluated pilot programs. Information gained from these efforts can make the design and implementation of larger scale projects more effective. What is needed now is a concerted effort to undertake programs that make theoretical and operational sense and to document carefully the effects of such efforts.

Prevention of the Effects of Exposure: Two Approaches

Particular concern should be focused on the prevention of the possible effects associated with violent sexual material. This material is defined as that in which explicit or nonexplicit sexual activity is either accompanied by violence (as in a rape depiction), is juxtaposed with violence (as when a woman is harmed immediately after sexual activity), or is otherwise linked to violence (as when the same musical theme occurs during both a sexual scene and a later violent scene). Prevention of effects of violent sexual material are targeted as worthy of serious concern because evidence from current research indicates a clearer link between viewing this particular material and consequent undesirable changes in beliefs and patterns of thinking about women and sexuality. Prevention of the possible effects of this growing aspect of the pornographic materials market is the most fruitful place to begin in order to make a substantial impact regarding possible negative effects on children.

Two general approaches to the limitation of negative effects of exposure to violent sexual materials are advocated. The first is to provide parents (and children) with cues to sensitize them to the materials that should be watched with caution. The second approach is to provide a framework of media literacy for viewing these materials that might limit the harmful effects of exposure. Done in unison, these two primary prevention approaches could promote careful choice of materials for child and adolescent viewing and a way of "innoculating" youth who do see potentially harmful materials.

First Approach: Cues Regarding Materials

Content labeling of movies would be one method for providing valuable information to parents and youth regarding materials that may have harmful effects on attitudes. It is generally impossible to ascertain the types or amount of violent or sexual content in movies by either their title or their ratings. This can be especially troublesome for parents who do not want to appear to condone a particular type of behavior by allowing their children to see a movie in which it occurs, either at a theater or at home.

Therefore, it would be useful for the movie industry to extend its current labeling of movies (G, PG, PG-13, R and X) to include more easily understood terms that would be used industry-wide.

Not to be confused with "warning labels", these labels would simply identify contents of the movies that some may wish to avoid. They would appear on advertisements for the movies and on the covers of movie cassettes. Examples of these labels can be found in a variety of television and cable movie guides (e.g., nudity, violence, adult situations, language).

The purpose and orientation of this content labeling approach is educational. It is primarily intended to make parents aware of the scenes that form the core of the films to which their children could be exposed. In the end, no labeling system or categorization scheme can be totally effective in limiting exposure of youth to particular types of materials. Recent survey research by Greenberg (in progress), for instance, shows that many of the most popular R-rated films had been seen in movie theaters by a majority of 14-15 year olds in a broad sample. While it is unclear how many more youth may have seen these films if there were no rating system, this research points up the validity of the common sense conclusion that responsibility for restrictions on viewing of certain materials rests heavily with the family or the youth. With this in mind, it would seem useful to provide as much information about the content of movies as reasonable so that an informed choice could be made.

An additional method for highlighting the possible negative effects of certain materials is to schedule the television showing of these materials only at times that children would be least likely to see them. Some cable networks broadcast nonexplicit violent sexual movies during times when young children can easily watch them. Based on research findings reviewed earlier, it is reasonable to assume that repeated exposure to these materials during regular viewing hours conveys the message that the relationships or activities seen in these movies are common in the real world. Merely showing these movies exclusively during hours when most children are not normally awake could limit the exposure and subsequent effects on children's beliefs. While this restricted scheduling cannot prevent children from watching these movies, the fact that the children would have to break their normal patterns to watch them could reinforce the idea that the contents do not reflect frequently occurring behaviors, and the formation of improper beliefs from these movies might therefore at least be partially discouraged despite the viewing.

As mentioned previously, the ultimate responsibility for children's exposure to potentially harmful sexually violent materials currently rests with the family. These two rather nonintrusive measures would help the family to perform this function. Increased information about film content and restricted showing times could focus the

efforts of parents and guardians who are presently assuming that no such preventive measures implies no possible harm from these materials.

Second Approach: Media Literacy

The second major strategy for limiting any harmful effects on children of exposure to violent sexual materials is to increase the capacity of children to withstand any possible negative effects of exposure to these materials. If one takes as a given that limiting exposure can only be done with marginal success because of the easy access to media with sexually violent themes, it then becomes imperative to explore the possibility of teaching children, adolescents, and adults to evaluate critically the contents of media presentations and to be aware of the effects that certain presentations can have on beliefs and attitudes. Using existing institutional structures, adults and children could be educated about these issues in broadly based programs designed to teach consumers about the media.

There is reason to believe that a media literacy program regarding the effects of violent sexual material could be effective, based on the results of several studies that have examined ways to counteract influences connected with exposure to these materials. Several studies (e.g., Check & Malamuth, 1984; Malamuth & Check, 1984; Krafsa, 1985; Donnerstein, 1986) have shown that presentations outlining the ways that violent sexual material can foster or reinforce incorrect beliefs or negative attitudes have been able to prevent the expected results of exposure. In other words, educating people about the possible effects of exposure, in conjunction with exposure, appears to reduce or eliminate the shifts in attitudes that are usually seen after exposure.

These presentations have generally been given to groups of college students who had recently watched one or more violent sexual movies. The ways that their beliefs may have been affected by the movies were demonstrated by showing them a scene from a violent sexual movie and highlighting the particular false belief that it supports. For instance, showing a scene in which a woman who is being raped eventually appears to be aroused by the experience and noting that this supports the incorrect belief that women generally enjoy being raped has been shown to reduce the acceptance of that belief. While this type of presentation is not appropriate for all children and adolescents, it may be appropriate for older adolescents and may be adapted to be useful with younger children as well. What is impressive and potentially useful about these research findings is the demonstration that youth may be able to be

"innoculated" against these influences through a carefully planned exposure to materials. Careful use of the very material that one may want to restrict access to may hold the key for ensuring that harmful effects are minimized when inevitable exposure does occur.

While this approach could be adapted and integrated into a school curriculum or organizational program effort, broader media literacy approaches could also be undertaken. Television and radio, for example, could be influential in promoting attitudes that counteract those possibly fostered by exposure to violent sexual media. Research by Greenberg (in progress) has indicated the popularity with adolescents of many of the night-time situation comedies and afternoon soap operas. Several of these programs have included episodes which promote the beliefs of equality, sensitivity to others, and social responsibility, and which illustrate some of the negative aspects of attitudes like those that may arise from viewing violent sexual material.

These shows are to be commended for their efforts to promote positive attitudes, and steps could be taken to make public commendations to that effect. The Surgeon General, other public figures, or the media industry could give an award regularly for programming that promotes positive sexual attitudes and provide favorable publicity to these shows as a result. It would be hoped that such recognition would encourage the inclusion of these themes in a systematic manner into the format of other shows.

Finally, other direct efforts using media could be made. Public service announcements which reinforced attitudes counter to those which condone sexual aggression could be of use. Also, radio programs could integrate material related to attitudes toward sexual coercion into their programming. This could be done effectively by including media-literacy themes into programs that are popular with children and adolescents in which listeners phone in and speak with a mental health professional.

The purposes of this broad media literacy effort would be to sensitize the public to the presence of particular attitudes and to warn them about the possible mechanisms which could promote these attitudes. This approach makes sense as an application of a positive strategy that has been used in curbing cigarette smoking and combatting drug abuse. Educating people empowers them to do something about a problem, and providing information about the development of attitudes toward sexual coercion could be the most effective long term tactic in countering the harmful effects of exposure to violent sexual pornography.

Before leaving the question of prevention of harmful effects of exposure, a secondary prevention strategy that should at least be mentioned here is that of early identification. Some research has indicated the possibility that adolescents and adults who are sexually aroused by depictions of violence, or who regularly have sexual fantasies involving high levels of violence, are at a higher risk for coercing someone else to engage in sexual activity. This screening information could be of potential value both to youth experiencing such arousal and to adults to whom they might turn for counsel. Discussions about their arousal patterns could help these youth to feel more comfortable with their sexuality and may help to reverse thinking patterns or beliefs influencing behavior in undesirable ways.

At the same time, it is obvious that this information could also be very dangerous in promoting labeling. The overall prevalence and normalcy of these patterns of arousal among those who never are coercive is not known, and suggesting to youth who have them that they are destined to become sexually coercive may encourage such behavior in individuals who otherwise would not engage in it. As a result, any such efforts at early identification of adolescents with arousal patterns related to violence would have to be handled with extreme care, and would probably be best begun after additional research on the development of these patterns has been done. Presently, inclusion of the information that certain individuals may be aroused by violence as part of general educational approaches would seem appropriate, but isolation of individuals with such arousal patterns would seem premature.

Prevention of the Effects of Involvement

Preventing children's involvement in the production of pornography and intervening with those who have been involved presents a formidable challenge to child protection agencies, social service providers, mental health professionals and legal authorities. General prevention and intervention strategies are presented here, but, as in the previous discussion, there is no detailed consideration here of the steps that could be taken by enforcement agencies to combat this problem. Providing general statements and observations about prevention strategies was a sufficient challenge for the Workshop participants.

As a first step in focusing efforts and gathering valuable information for the design of future prevention programs, efforts to locate and aid those youth currently involved in the production of pornography must be increased. This effort would in-

clude encouraging child protection and mental health agencies to develop clearer methods for accurately identifying these youth, disseminating this information to appropriate adults (e.g., parents, teacher, physicians, mental health professionals), and encouraging the reporting of these youth to the appropriate public agencies. This proactive strategy of case finding and service provision would be a humane way to prevent ongoing victimization of children, to gather badly needed information about the dimensions of this problem, and to educate professionals about the methods used for involving children in this activity.

The importance of providing mental health services after disclosure of involvement in the production of pornography is underscored by research done by Burgess and her colleagues. In a study of a sample of youth involved in pornography rings (Burgess et al., 1984), these investigators found an exacerbation of symptoms after disclosure of involvement. In addition, it was found that many children did not receive mental health services after disclosure of their activities. Given these two findings, it appears imperative that services at least be made available and strongly encouraged for youth immediately after disclosure. It is at this time that the youth would be in the most volatile state regarding the meaning of involvement, and this opportunity should not be missed to help provide the youth with a framework for viewing this situation.

Programs to prevent children's involvement in the production of pornography should be established simultaneously. Of central importance to the planning of these preventive intervention efforts should be the recognition that the youth who are likely to be involved in the production of pornography almost invariably have multiple interpersonal and family problems. These are not youth with a clearly identifiable, singular problem that makes them "at risk." Instead, most of these youth end up involved in pornography as the result of a tragic chain of events that has stripped them of standard support structures during a developmental period when these supports are essential. Research has shown that most of the children and adolescents involved in the production of pornography have run away from or been forced to leave their home and turn to pornography as a way of surviving. Others have become emotionally abandoned by their families and turn to those involved with pornography for emotional support (e.g., see Burgess & McCausland, 1984; Silbert & Pines, 1984).

The merging of opportunity, situational need, and lack of emotional attachment foster involvement, and this means that it is unrealistic to think of identification of high risk youth in this area in terms of any particular personality measures. There are a large number of homeless or emotionally abandoned youth who are "at risk" largely

by virtue of their life situation. These are the youth who must be targeted for prevention efforts.

A corollary of this premise regarding identification is that services in this area are also not providing a clear remedy for a disorder. Instead, they are competing with the producers of pornography for contact with an alienated and disenfranchised group of young people. As a result, the key to involvement with these youth is the provision of the same things that the producers of pornography use to lure youth into this activity: emotional engagement and financial support. Programming, therefore, must be creative and adaptive, and cannot afford to be professionally parochial.

Establishing a working relationship with these youth is a difficult task; one that requires active outreach and a variety of services offered by a community-based umbrella agency. Establishing and maintaining contact early on in a youth's experience on the street, however, appears to be a critical component to success. Clinical reports consistently document the callousness and defensiveness that accompanies continued exposure. It is during the initial period that these youth are most susceptible to influence from either service providers or those interested in using these youth. As an adolescent finds contacts and builds an awareness of what it takes to survive on the street, it becomes increasingly difficult to propose an alternative. The known is at least predictable, and it is hard to believe that any proposed arrangement will really work out any better than the present situation.

Providers attempting prevention in this area must be prepared to offer more than just a single service (such as counseling) and must be prepared to be on the street rather than in an office. A component of these programs would include reuniting some of the youth with their families. Other youth who are unable or refuse to return to their families should be given shelter and emotional support, taught independent living skills, given vocational and traditional education, and provided with the opportunity to establish independent lives. This is a tall order for any service, but multifaceted programming is critical, given the myriad of needs that can be present with this broad at-risk group.

This lack of a clear singular service may be in conflict with the predominant trend toward specialization and professionalization in mental health care provision. In many ways, what is being advocated is classic street social work combined with an organizational plan for a multi-purpose alternative setting. Starting where the client is appears to be critical in this area, however, and this means that the lines between mental health services, education, and provision of material needs must often become blurred when working with these youth.

In summary, what is being highlighted here is the need for innovative programs

to address the particular needs of a broad group of disenfranchised youth who are likely victims for involvement in the production of pornography. General calls for prevention in this area can be made, but the reality of the situation is that someone has to go onto the street and establish programs that appeal to the youth there. These programs cannot be of the traditional model of mental health service provision merely located in a rundown neighborhood. They must involve settings with a wide range of services and clear sense of mission. Establishing and maintaining them will be a true challenge, but one that must be undertaken if the flow of children into the pornography industry is to be curtailed.

SUMMARY

It may have been the hope of some that this Workshop would produce a profound summary statement or authoritative, comprehensive package of findings about the effects of pornography. What was produced instead was more of a progress report. All of the facts are not in yet regarding the effects of pornography, but enough facts are in that an assessment of future directions for research and prevention can be made.

What is known about the effects of pornography can be broken down into two bodies of knowledge. First, considerable clinical material has documented the personal tragedies and continuing problems for youth who are involved in the production of pornography. This form of sexual victimization has been seen to have longstanding, adverse effects on youth. The amount of unique influence that pornography involvement has on the development of psychological and social problems in the youth seen cannot be accurately determined, however. It is often one of many influences that have contributed to an already dismal childhood. There does not seem to be any clear rationale, however, for maintaining that this involvement is not a significantly damaging factor in the lives of the youth who become involved in the production of pornography. Pure and simple, it is another form of sexual victimization of vulnerable youth.

Second, a body of knowledge has demonstrated that exposure to pornography, especially violent sexual pornography, has effects on beliefs, attitudes, and laboratory behavior. Repeated exposure in controlled conditions alters the beliefs of late adolescents about the frequency of certain uncommon sexual practices in the general population. Exposure to violent sexual pornography in which the victim is aroused by assault produces more acceptance of the use of coercion in sexual relationships. Exposure to violent pornography also produces more aggressive behavior toward women in laboratory simulation tasks. Finally, it appears that the presence of attitudes condoning the use of sexual coercion (the same ones that are altered by exposure) appear to coexist with reported or detected sexual aggression.

These bits of knowledge, however, do not yet form a totally coherent picture of the real world effects of exposure to pornography. We still know little about actual

patterns of use or the power of attitudes in precipitating sexually aggressive behavior. Much research is still needed in order to demonstrate that the present knowledge has significant real world implications for predicting behavior. Pornography is one of many potential influences on behavior and it must be assessed in conjunction with some of these other factors in order for more global statements about effects to be warranted.

While highlighting the need for more research, the presently incomplete state of knowledge does not preclude reasonable preventive actions from being taken. Programs for youth involved in the production of pornography or likely to be lured into such involvement should be supported. These have to be street-based, innovative approaches in order to be efficient rather than just pro forma prevention. On a more primary prevention level, labeling of materials should be done and media literacy programs should be developed. These initiatives could help educate the public about both the types of materials available to youth and the development of sexual attitudes.

As emphasized from the outset, the purpose of this Workshop was to give a reasoned professional opinion on the effects of pornography. It was not to prescribe policy or make grand calls for reform. What is evident after examining the evidence in this light is how disturbing, intriguing, and incomplete our knowledge of this topic really is.

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BACKGROUND PAPERS

(In the order they were discussed in the program)

"Psychological Research and Public Policy: Taking a Long, Hard Look Before We Leap"

Donn Byrne and Kathryn Kelley

"Effects of Prolonged Consumption of Pornography"

Dolf Zillman

"Do Sexually Violent Media Indirectly Contribute to Antisocial Behavior?"

Neil M. Malamuth

"Effects on Juveniles of Being Used for Prostitution and Pornography"

Mimi Halper Silbert

"Techniques Designed to Mitigate the Impact of Mass Media Sexual Violence on Adolescents and Adults"

Edward Donnerstein

Psychological Research and Public Policy:

Taking a Long, Hard Look before We Leap

Donn Byrne and Kathryn Kelley

State University of New York at Albany

When psychologists find themselves in the relatively

unfamiliar position of being consulted as experts about important issues of public policy, two common --- though incompatible --- reactions are commonly observed. One possibility is to retreat rapidly to the laboratory behind a protective shield bearing the inscription MORE RESEARCH IS NEEDED. The opposite choice is based on the assumption that important decisions are going to be made with or without psychological input. If so, one may as well charge boldly forth armed with theory and data in an attempt to influence the decision-making process.

Though we find it easy enough to advance arguments to support either reaction, our basic message is to urge that caution be exercised. When major societal changes are being considered in the form of introducing new legislation, repealing existing legislation, or altering enforcement and regulatory practices with respect to current laws, a conservative stance has much to recommend it. Because any change involves countless unforeseen consequences, it is vital that the reason for such change be very well established. The same point is made more pithily in the saying, "If it ain't broke, don't fix it." That advice could be amended to suggest that even if you aren't sure "whether it's broke or not, don't rush to fix it."

With respect to the effects of pornography on behavior and the need to "fix it," the Attorney General's Commission on

Pornography has issued an introduction to its upcoming publication (Report: Pornography can lead to violence, 1986). In it is the conclusion that exposure to most pornography "bears some causal relationship to the level of sexual violence, sexual coercion or unwanted sexual aggression." As individuals who have conducted research in this field and who testified before the Commission in its Houston hearings, we are disturbed by this conclusion and by the policy recommendations to be made involving new federal laws dealing with obscenity, pandering, and labor practices as well as recommendations concerning the use of the powers of the Federal Communications Commission and the establishment of an obscenity task force in the Justice Department that will focus on prosecution. Such conclusions and recommendations may not have a firm data base, but they are consistent with studies of the perseverance of social theories (Anderson, 1982; Anderson, Lepper, & Ross, 1980). In fact, this perseverance bias is most pervasive when it is based on extremely weak data such as vivid case histories (Anderson, 1983).

Even before the formal report is issued and new laws considered, it is ominous to find that the 7-Eleven chain can be pressured to remove such erotically dull publications as Playboy and Penthouse from its shelves. The announcement of that decision was soon followed by the removal of American Photographer from magazine racks in Kansas because the distributor discovered a photograph of an unclothed female breast in one issue (Photo magazine canned in Kansas, 1986).

In view of such governmental recommendations and anticipatory reactions in portions of the business community, our

cautionary stance does not seem to be baseless. It is not based on timidity or professional modesty, but on the knowledge that judgments are routinely made on inadequate bases and that the utilization of sophisticated research methodology, statistics, and professional jargon can sometimes serve only to camouflage the inadequacies of the decision-making process rather than to correct them. Please note that these warnings are directed equally at psychologists and nonpsychologists alike. Sexuality seems to be especially vulnerable to this problem as when well meaning physicians at the end of the last century and beginning of this urged parents to take whatever steps were needed to eliminate childhood masturbation in order to prevent loss of memory and intelligence, depression, nymphomania, retarded growth, headache, sleeplessness, pain, weakness in the back and genital organs, cowardice, dry hair with split ends, heart pains, constipation, coughing, epilepsy, paralysis, premature old age, and death (Stout, 1885; Walling, 1904).

Before turning to the specific question of interpreting research on the effects of erotica, it may prove helpful to point out precisely why truly objective judgments are generally difficult or impossible to achieve and to remind ourselves of an embarrassing chapter in psychology's past with respect to our field's very effective influence on public policy.

Difficulties Encountered by Emotional Organisms

Trying to Make Rational Decisions

One paratheoretical dispute among behavioral scientists is the tendency to emphasize the rational versus the affective aspects of human behavior. Whether we each function as a

computer-like mechanism dealing with facts, probabilities, and cost-benefit ratios or as a wary mammal primarily motivated simply to avoid pain and achieve pleasure is a venerable issue and one that cannot readily be settled on an empirical basis (e.g., Mandler & Shebo, 1983; Zajonc, 1980).

We identify ourselves with the affective emphasis and propose that most human decision-making occurs on the basis of an emotion-based sequence of reactions (Byrne, 1971; Byrne, Rasche, & Kelley, 1974; Clore & Byrne, 1974). As an oversimplified version of this approach, it is proposed that stimulus events often elicit short-term affective responses that, in turn, form the basis for temporally stable evaluative responses such as attitudes. These attitudes, in turn, influence approach versus avoidance behavior. At the most rudimentary level, a child tastes ice cream for the first time, experiences positive affect, and concludes that he or she likes ice cream. Subsequently, that individual is inclined to desire ice cream, to ask for ice cream, to purchase ice cream, to eat ice cream when it is available, etc. On another occasion, the same child may taste cabbage, experience negative affect, and conclude that he or she dislikes cabbage. Subsequently, that individual is inclined to avoid contact with this vegetable, to refuse to eat it, etc. Because many stimulus events have mixed effects and elicit combinations of positive and negative affect (e.g., curiosity, fear, pleasure, guilt, and so forth), it has been necessary to specify the mathematical rule whereby discrete affective responses differing in magnitude and valence are combined to yield a simple evaluative response (Byrne, 1982, 1983). This conceptualization

involving stimulus events that elicit affect that forms the basis of stable evaluations that influence overt behavior has proven to be a useful one for predicting a variety of behaviors (e.g., Byrne, Clore, & Smeaton, *in press*; Byrne & Lamberth, 1971; Byrne & Murnen, *in press*; Fisher, Byrne, & White, 1983).

Actually, the description of behavior just outlined is consistent with the behavior of many organisms, including our two Golden Retrievers. That is, they show overt signs that appear to reflect pleasure in response to being fed, petted, or talked to, and they wag their tales, try to lick our faces, and run toward us --- whining, jumping, and rolling on their backs. They also show overt signs that appear to reflect to reflect anger and fear in response to being teased by small neighbor boys and bark ferociously when they appear, sometimes running toward them with menacing growls and sometimes running out of sight into their dog houses.

With human beings, analogous responses to positive and negative stimuli are somewhat more complex than those of these two not overly bright dogs. The cognitive capacity of our species is such that behavior can also be guided by rational considerations in addition to affective ones. If not, we would never visit a dentist or turn down a second helping of chocolate cake (Kelley et al., 1985). In addition, even when we respond to simple emotional determinants, we seem to feel constrained to supply logical, rational justifications for our decisions and our actions (Byrne, Fisher, Lamberth, & Mitchell, 1974). It is this need to justify many basically simple and primitive reactions that creates a great many problems.

To leap ahead to the pornography question, it is perfectly understandable that explicit depictions of nude men and women engaging in various sexually explicit activities make some individuals feel anxious, guilty, ashamed, angry, and/or nauseated while others respond with interest, curiosity, excitement, and joy. These differences would seem to be based on differences in socialization experiences, parental attitudes, cultural influences, and specific personal experiences (Fisher, Byrne, White, & Kelley, 1986). The consequence would seem to be simple --- those who respond negatively should avoid sexual explicitness and never be forced to encounter it; those who respond positively should come in contact with as much of this material as they wish and never be deprived of the opportunity (Kelley, 1979, 1985a, 1985b). This simple sequence of events rarely occurs, and the initial stumbling block is our human tendency to justify our own reactions. Long before there were research data of any kind dealing with the effects of exposure to sexual images, many argued strongly that this imagery was dangerous and debilitating to the individual and to society while others argued strongly that it was liberating and healthful to the individual and to society (Byrne & Kelley, 1984).

In a totally rational and ideal world, these contradictory propositions about the effects of sexually explicit presentations could be resolved by the objective application of the methods of behavioral science to confirm or disconfirm the conflicting claims and expectancies about the behavioral, emotional, and attitudinal effects of exposure. Such an assumption would seem to underlie the work of the first Commission on Obscenity and

Pornography, appointed in 1968 under President Johnson, At that time, almost nothing was known about the effects of explicit sexual material, and by 1970 when the Commission report was published and 1971 when the series of technical reports was published, one might have hoped that all of the controversies would have been settled once and for all.

That did not happen, of course, because (1) scientific questions are never settled once and for all and (2) scientists are human beings who are influenced by their own emotional responses and their need to justify their emotional responses. Perhaps the second of these assertions can best be illustrated by briefly examining an earlier example of behavioral research and public policy applications in an area far removed from sexuality.

The Fruitless Search for Objectivity

and the Pervasive Influence

of Emotions, Attitudes, Beliefs, and Values

From time to time one hears the assertion that certain activities such as judicial proceedings, news reporting and science are, or should be, objective and unbiased in their communications to the general public. At the risk of stating the obvious to some and the heretical to others, we are forced to conclude that objectivity is most often an impossible dream. We select, believe, remember, and conclude in large part on the basis of our existing emotions, attitudes, beliefs, and values. Alter (1986, p. 15) provided an interesting example of this process with various assertions in 1984 about what George Orwell's politics would have been had he lived until the year he made infamous. "Liberals and socialists tended to argue that

Orwell would be a liberal or a socialist today. Conservatives and neoconservatives tended to insist that he would be a conservative or neoconservative."

One place we clearly expect objectivity is the courtroom, but there are plentiful data dealing with jury selection, eyewitness testimony, attorney behavior, and juror bias to suggest the opposite (Baron & Byrne, *in press*). Research even indicates that judges unwittingly communicate their attitudes about a defendant by means of nonverbal cues such as tone of voice (Goleman, 1986). In this instance, the decisions of jurors are found to be affected by these affective judicial messages.

In news reporting, the objective ideal is also invoked. Despite various accusations about the liberal bias of the networks, it has been found that the verbal content of the network news is surprisingly fair with respect to liberal versus conservative biases (Robinson, 1985). Undoubtedly a small army of writers and editors work very hard to achieve this goal. Even so, nonverbal emotional and attitudinal messages are conveyed, probably unconsciously, by way of smiles, frowns, and other facial indicators of the news person's own reactions (Mullen et al., *in press*). In the 1984 campaign, it was found that Peter Jennings on ABC showed a nonverbal bias in favor of President Reagan while Dan Rather and Tom Brokaw managed to respond nondifferentially to Reagan and Mondale. It was also found that ABC viewers were more likely to vote for Reagan than were viewers of CBS and NBC.

Though these findings could indicate the awesome power of television to influence the attitudes and behaviors of viewers,

it is more likely an indication of the tendency of viewers to expose themselves to and to believe that which matches their previously established biases. Whatever we tell ourselves about our openmindedness, there is a well established tendency to seek out that which fits whatever we already believe and to avoid that which does not. One documented example was the disinterest of pro-Nixon viewers in the Watergate hearings versus the continuing fascination of anti-Nixon viewers with every detail (Sweeney & Gruber, 1985).

Despite these various examples, surely science must be a totally different matter. Scientists seek empirical tests and rely on hard data to buttress or refute their hypotheses. This is true, of course, and it constitutes the major strength of this particular approach to acquiring knowledge about the world. It is nevertheless more difficult and time-consuming that it sounds to obtain a sufficient body of data to overcome pre-existing beliefs about anything whether the topic is planetary orbits, evolution, or the germ theory of disease. Even the seemingly least subjective aspects of a scientific quest are guided by one's beliefs about what will be found (Kelley, 1985c). Kuhn (1962, p. 59) suggested that, "The decision to employ a particular piece of apparatus and to use it in a particular way carries an assumption that only certain sorts of circumstances will arise."

Scientific bias is not necessarily this subtle, but even blatant abuses are easiest to spot when one is far removed in time and in cultural support from the incident. Gould (1981) has detailed the way in which prevailing racial, ethnic, and sexual biases in the first half of this century exerted a profound

effect on psychological research involving intelligence and on the conclusions drawn from the data that were obtained.

The belief in hierarchically ordered group differences based on genetic factors was widely accepted, and behavioral scientists were able to provide seemingly irrefutable data that supported such beliefs and served to affect public policy decisions in a direction consistent with the beliefs. At the clearly unethical extreme lies the falsification of data by those holding hereditarian views as when the photographs of Goddard's (1912) Kallikak family were retouched to make them look convincingly depraved, sinister, and diabolical (Gould, 1981) or when Sir Cyril Burt (e.g., 1966) fabricated investigators, subjects, and data to support his views as to the innateness and unchangeability of intelligence (Hearnshaw, 1979; Kamin, 1977).

Much less obvious bias can affect the work of otherwise objective investigations. For example, when H. H. Goddard (1913, 1917) assessed emigrants arriving in the U. S. at Ellis Island, he found that from 79% to 87% of the Jewish, Hungarian, Italian, and Russian arrivals were "feeble-minded." This apparent assault on the U. S. gene pool was soon alleviated by legal restrictions on who could be admitted to this country and by a rapid increase in the number of annual deportations on the basis of being classified as mentally defective. Any considerations of cultural, experiential, or linguistic barriers to valid intelligence testing were ignored.

On the other side of the continent, Lewis Terman's (1916) investigations with the Stanford-Binet led him to conclude that high grade defectives (i.e., the working class, especially

Spanish-Indians and Mexicans) should be identified, placed under society's surveillance, and curtailed from reproducing. His laudable goal was to eliminate crime, poverty, and industrial inefficiency.

The power of emotional-attitudinal bias is demonstrated by such examples, and the eventual power of the scientific method is shown by the fact that Goddard and Terman later changed their minds on the basis of additional data. The public policy caution must be repeated, however. Before these and other investigators were converted, a great many human beings had been refused entry to the U. S., deported from the U. S., and sterilized. In Great Britain, Burt's influence on the educational system --- early testing and rigid stratification --- is still being felt. Those who were unfairly treated on the basis of such policy decisions might find it more difficult than we do to respond sanguinely to the eventual corrective powers of the scientific enterprise.

How do these various points, issues, and examples apply to the question of pornography and its effects? The general difficulty in achieving objectivity should be clear, except that it should be underlined that emotional reactions to questions about sexuality are stronger and more pervasive than reactions to questions about politics, courtroom defendants, or intelligence. We will suggest a few of the most obvious specific problems encountered in conducting and interpreting research in this area and, most importantly, in using these research findings as justification for taking action against individuals, business concerns, goods, or services that have any relationship to sexually explicit words and pictures.

Sex Research as an Exemplar
of Individual and Cultural Biases

The task of identifying the effects of explicit sexual presentations on behavior is not conceptually an unusual or especially difficult one, but it becomes unusual and extremely difficult because of the affective aspects of anything having to do with sex. Thus, it would undoubtedly be much easier to think clearly, argue cogently, and act rationally if the topic were the effect of explicit presentations of dessert recipes on calorie intake.

For the present discussion, we will narrow the focus to a specific question about sexual imagery. Does exposure to explicit sexual material on a short-term or long-term basis have an effect on coercive sexual behavior? While there is considerable disagreement as to the desirability of other effects of exposure to erotica (e.g., an attitude shift toward increasing permissiveness), almost everyone can agree that sexual coercion is unacceptable --- there are few proponents of sexual harrassment, rape, and child abuse. Since the initial hearings of the first Commission in the late 1960s, a great deal of research has been conducted by behavioral scientists in both laboratory and field studies. Over the last decade, the rapid development of appropriate measuring instruments and research methodologies, the growth in the amount of available empirical data, and the development of relevant theoretical formulations have been phenomenal. Despite the progress that has been made, it is difficult to conclude that we know enough to take steps that directly affect the rights of our fellow citizens.

in science, controversy and uncertainty are an integral part of the game. The fact that scientists attempt to be open to new data and new ideas and hence to a revision of previously held beliefs is the basic strength of this approach to knowledge. In the everyday world of legislation and law enforcement, controversy, uncertainty, and shifting conclusions are disastrous. Let us now take a brief look at some of the detailed reasons for being cautious about moving from sex research to making policy.

Examining Imperfect Substitutes
for the Dependent Variables

An unavoidable weakness in the study of coercive sex is sometimes ignored. We are unable directly to investigate the behavior in question. There are few fields of inquiry in which the prime dependent variable is excluded from the research process. As difficult as it has been to study any form of sexual responding, the development of measuring devices that assess male and female genital arousal (Kelley & Byrne, 1983) and the creation of a laboratory setting in which autosexual, heterosexual, and homosexual acts are observed and physiologically recorded (Masters & Johnson, 1966, 1979) has brought much of human sexuality within the realm of ordinary scientific procedures.

Analogous advances in the study of coercive sexuality cannot ethically be undertaken. As a result, it is necessary to rely on other variables that may or may not be directly relevant. So, we ask subjects what they have done in the past and what they hypothetically might do in the future. Analogues can be created

as when the pressing of a button supposedly causing pain to another person is roughly equated with interpersonal aggression. Emotional responses to verbal and/or auditory depictions of rape, torture, or child abuse can be used as rough samples of how an individual might respond to similar scenes in everyday life. Finally, archival data such as public statistics of reported crimes can be correlated with other societal variables in the hope of identifying causal links (Kelley, 1985c).

There is no intention here of disparaging the creativity of those who developed such methodologies or of dismissing the resultant findings as irrelevant. One might, nevertheless, hesitate to assume perfect correspondence between these behavioral measures and genuinely coercive acts.

Case Histories:

For Instance Isn't Proof

The careful gathering of case history material has played and can continue to play a valuable role in psychology as a source of data and hypotheses about human sexual behavior (Byrne & Kelley, 1984b).

In contrast, when case histories are treated as the final step in validating or disconfirming a predicted relationship, they are not only useless but frequently dangerous. Even without the dramatic trappings of anonymous victims and sincere police officers testifying before the Pornography Commission, we have each read newspapers and magazine accounts that present many versions of a scenario in which a convicted rapist is found to possess pornographic magazines, books, or movies. Even with multiple instances of such discoveries, this type of "evidence"

for the dangers of erotica would be clearly ludicrous were it not for the widespread acceptance of such data.

Without belaboring the obvious, the general problem of selecting some small aspect of the total array of data and the need for a control group can perhaps be illustrated by a comparison. How convincing would it be to read that police officers discovered homogenized milk in the refrigerator of a convicted rapist? Without knowing whether this activity differentiated rapists from a matched sample of non-rapists, few of us would be inclined to propose laws banning dairies, forbidding milk distribution, and removing this product from refrigerated grocery shelves.

Existing Beliefs Guide

Research and Its Interpretation

The leap from isolated case history data to a conclusion about cause and effect occurs in part because of preexisting and widely held beliefs. Such beliefs have a more general influence as well.

For example, a link between sexual and aggressive impulses has long been assumed, and biological explanations have been offered (MacLean, 1965). It was said that the brain's limbic system provided the link between the arousal of these two motivational processes. The basic assumption was that an expression of aggressive behavior facilitates sexual arousal. The everyday analogy is that spouses may argue and then lovingly make up their differences. There is even the observation that a physical assault on one's spouse is mutually energizing to subsequent sexual interactions (Kelley, 1985c).

Whatever ultimate conclusions we draw about the validity of the general proposition, one line of research was undertaken that indicated that anger increased sexual arousal as measured by sexual imagery created by subjects in response to TAT-like stimuli (Barclay, 1969, 1970; Barclay & Haber, 1965). Those TAT pictures involved males and females in dominant and submissive roles, and subsequent research in our laboratory provides evidence that it is the degree of depicted dominance that determines whether sexual imagery is expressed in the stories. Neither anger nor the opportunity to aggress was found to have any effect on sexual arousal (Kelley, Miller, Byrne, & Bell, 1983).

A quite different line of research indicates that sexual arousal in response to aggressive cues may occur but only for a small subset of the male population (Abel, Barlow, Blanchard, & Guild, 1977; Greendlinger, 1985; Kelley, 1985d; Malamuth, Check, & Briere, 1986). An even smaller group in a sample of sex criminals enjoys mentally transforming mutually consenting sexual stories into tailor made fantasies of rape and violence (Marshall, 1985).

It can be seen that the assumption of an aggression-sex link at first led to confirmatory results. Second, the attempt to clarify the relationship yielded new information about the role of dominance. Third, the original proposition may be valid but only for certain identifiable individuals. Though the original assumption may not be totally accurate as stated, belief in its validity has served as a road map to suggest what research questions to ask and what findings to expect.

The Importance of Content:

Do We Want to Prevent the Modeling
of All Sexual Activity?

The literature on modeling provides strong support for the proposition that those who are exposed to sexually explicit images would show an increased tendency to imitate whatever sexual activity had been presented. Existing evidence indicates that individuals so exposed express the desire to imitate the depicted acts (Bryant, 1985), report their intention to engage in such an act (Wishnoff, 1978), and increase the frequency with which they perform the behavior (Heiby & Becker, 1980).

The fact that erotic presentations are not always followed by imitative behavior can be explained by the fact that negative emotional responses to the depiction do not lead to the desire or intention to engage in the activity and that inhibiting factors may intervene ---anxiety, guilt, moral beliefs, legal restrictions, expectancies of unpleasant consequences, and the nonavailability of a suitable or willing partner or partners (Kelley, 1985e).

How we as individuals or as a society evaluate the desirability of the depicted behavior and its possible imitation goes beyond what scientific inquiry can appropriately answer. We noted earlier that coercive sex is generally disapproved, and we suspect that loving, procreational sex in the context of marriage is generally approved. Between those two extremes lie a vast number of possible activities, the acceptability of which is open to honest disagreement. We know that sexually dysfunctional individuals can learn from certain depictions how to initiate

sexual intercourse with a spouse, to engage in lengthy foreplay, and to reach orgasm (Nemetz, Craig, & Reith, 1978) and that in the context of sex education students can learn about the use of contraceptives and the prevention of sexually transmitted diseases (Kelley, Byrne, Greendlinger, & Przybyla, 1985). Are those instances of modeling acceptable? How do we react to the depiction of promiscuity, adultery, or homosexuality?

It seems to us that any statements about the effects of erotica miss the point. Whether or not individuals are depicted as clothed or unclothed and using or not using their genitalia seem much less relevant to anything than the emotional, attitudinal, and moral context in which the behavior occurs. These considerations necessarily extend beyond erotica to a consideration of sexist television commercials, reckless car chases on TV, slasher films, and much else besides.

Some Additional

Research Problems

Sampling bias. In any studies of human behavior, sampling is an everpresent problem. In much that we do, psychologists utilize admittedly inadequate samples of the total population and fervently hope that the findings have generalizability. With studies of sex, we know that any informed volunteers differ from the general population. Subjects in sex studies are found to be more sexually permissive and more sexually experienced than non-volunteers. Though such sampling biases by definition affect the results of survey research, we know very little about their effect on experimental investigations. That knowledge is crucial to permit us to generalize with any confidence from the behavior

of volunteer subjects to the behavior of the population at large and hence to policy decisions.

Correlational data. The elementary fact that correlation does not indicate causation hardly seems worth mentioning except for the fact that when the topic is sex, basic knowledge sometimes is forgotten. A case in point is Baron's (1985) very interesting and widely quoted finding that there is a correlation across states between the circulation of sexually oriented magazines and the incidence of rape. Despite the author's warning about the correlational nature of his data, on two occasions at public forums we have heard that finding used to "document" the probable dangers of soft core publications as the instigators of sex crimes. It should be noted that other variables in that study such as the number of divorced males, economic disparity, and urbanization were more strongly related to rape incidence than were the sales of sexual magazines. Further, rape is also found to be related to the circulation of masculine publications such as Field and Stream and Guns and Amo (Scott, 1986).

On the opposite side, there are correlational data indicating that in societies in which pornography laws are made less restrictive, the rate of coercive sexual acts decreases or is unaffected (Abramson & Hayashi, 1984; Green, 1985; Kutchinsky, 1985). In a similar way, the self-reported pornographic exposure of convicted sex criminals is found to be less than that of non-sex criminals (Goldstein, Kant, & Hartman, 1974). Once again, correlations do not necessarily indicate that cause and effect relationships have been identified.

Individual differences. Whatever the general effect of

explicit material on behavior, there is abundant evidence that the such effects are not universal but are mediated by dispositional variables such as erotophobia, sex guilt, authoritarianism, and hypermasculinity (Fisher & Byrne, 1978; Kelley & Musialowski, *in press*; Mosher & Anderson, 1986; Mosher & Sirkin, 1984; Smeaton & Byrne, 1986).

Not only do individuals with different personality characteristics respond differently, they often are found to respond in opposite ways (Kelley, 1985f). Thus, an erotic depiction that has a positive effect on some viewers can have a negative effect on other viewers (White, 1979). It seems that attempts to enact general restrictive laws are analogous to banning the sale of peanut butter because some individuals have severe allergic reactions to this substance.

Restricted response alternatives. In any experimental setting, the response alternatives available to subjects are limited. This limitation is a valid and purposeful one. The major difficulty is that initial assumptions can determine the experimenter's selection of alternatives to be provided and thus create an unrepresentative view of behavioral effects (Kelley, 1985c).

For example, if one sets out to study the effects of sexually explicit films on aggression, the response possibilities tend to consist of degrees of aggression. The fact that these same stimuli may evoke positive responses such as altruism could not be known unless subjects were given the opportunity to behave in a prosocial way following exposure to erotica (Kelley, *in press*; Przybyla, 1985).

Limited exposure versus massive exposure. The problem of attempting to establish a laboratory equivalent of real-life experiences is never a simple one. Most often, we have access to human subjects only for a very limited period of time. With research on sexual imagery, there is often a very brief exposure followed by the assessment of immediate or relatively short-term effects. Much of the research conducted for the original Pornography Commission was of this type. Such brief contact may be quite different from prolonged contact. As a result, an investigator may be inclined to conclude erroneously that there is little or no effect. An analogy would be to investigate addictive drugs by examining what happens when individuals have one ingestion experience.

Given the temporal limitations of subject access and the possibility that measureable effects might require years of exposure (Byrne, 1977), a different strategy is to employ massive doses of erotica (e.g., Zillmann & Bryant, 1984). Though this procedure might well represent a speeded-up simulation of what ordinarily takes place over a much longer time span, it also may distort such effects. An analogy would be the laboratory studies of the health effects of diet soda that concentrate longterm consumption patterns in a limited time segment. It seems likely that the effects of drinking one soda per day for five years may not be precisely the same as the effects of consuming 73 bottles per day for 25 days.

Conclusions

The foregoing discussion of the multiple reasons for caution in applying what we know in ways that affect society can easily

be misinterpreted to mean that behavioral research is worthless and that we might do as well or better consulting our grandmothers rather than psychologists.

Our clarion call for inaction should not be taken to mean that action is never appropriate. Though each individual investigation may present problems of interpretation, the accumulation of consistent findings in multiple investigations by different investigators holding different biases, using different methodologies, across quite varied samples, measuring a variety of behaviors in a variety of ways, can eventually lead to a widely accepted conclusion that may warrant societal action. The gradual accumulation of data about the effects of cigarette smoking has led over a period of decades to increasing agreement (even among smokers) about the dangers and a slowly accelerating series of steps to prevent or discourage smoking and to protect passive as well as active inhalers of tobacco fumes.

There is no magic moment at which the accumulated knowledge suddenly is "enough" to achieve consensus, but there is surely no reason to think that such a moment is upon us with respect to the effects of erotica.

Finally, let us suggest that if errors of judgment are to be made in this realm (and they are likely to be), it is preferable to err by waiting a few years too long to act than by rushing to act a few years too early. Procrastination that helps us avoid harmful decisions may represent the wisest course of action.

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Effects of Prolonged Consumption of Pornography

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Effects of Prolonged Consumption of Pornography

Most experimental investigations of the behavioral consequences of exposure to graphic portrayals of sexual activities have employed a research paradigm in which (a) subjects consume pornographic stimuli just once and (b) any effects are ascertained more or less immediately thereafter (cf. Donnerstein, 1984b; Malamuth, 1984; Sapolsky, 1984; Zillmann, 1984). This paradigm has much to recommend itself and is particularly suited to the testing of specific proposals concerning the psychological and physiological mediation of known consequences. However, as a means of establishing perceptual, attitudinal, and behavioral changes, especially lasting ones, the paradigm can rightly be questioned. First, many effects of interest may manifest themselves only after repeated exposure to critical stimuli. Second, and equally important, effects may be transient (cf. Berkowitz & Heimer Rogers, 1986; Wyer & Srull, 1981; Zillmann, 1983) and without consequence for later behavior. In establishing perceptual, attitudinal, and behavioral consequences of the consumption of pornography, then, it would seem imperative to employ designs that accomplish (a) repeated exposure with between-exposure intervals that simulate characteristic consumption patterns and (b) delayed assessments of effects with an interval between consumption and effects that rules out that the effects are of trivial duration. Experimental investigations that employed this latter type of design in exploring the effects of the consumption of pornography have actually been conducted and are summarized in this paper.

The prolonged-exposure paradigm has been pioneered in two investigations that were initially presented in the Technical Report of the Commission on Obscenity and Pornography (1971). Mann, Sidman, and Starr (1971; see also Mann, Berkowitz, Sidman, Starr, & West,

1974) explored the effect of repeated exposure to pornography on sexual behavior; and Howard, Reifler, and Liptzin (1971; see also Reifler, Howard, Liptzin, & Widmann, 1971) probed consequences for excitation and cognition in the later consumption of pornographic materials.

Mann et al. exposed married couples in four consecutive weekly sessions to sexually explicit films or, in a control condition, to nonerotic films. During the treatment period, subjects recorded their sexual activities in diaries. Exposure to erotica was found to stimulate sexual behavior only shortly. Sexual activities were more frequent on exposure days than on the days thereafter. The transitory, sex-stimulating effect diminished over the weeks and became negligible in the fourth week. Mann et al. emphasized that this stimulating effect was rather nonspecific, manifesting itself in a variety of sexual activities with which the couples were familiar. The investigators concluded that the couples did not adopt depicted sexual practices that were not already part of their behavioral repertoire. Exposure to pornography merely seemed to revive well established but dormant sexual practices.

The conclusion that pornography does not entice consumers to try out novel sexual practices is compromised by the fact that the investigation was conducted with couples who were married for at least ten years. Couples with such sexual histories presumably could detect little, if anything, in the erotic materials that was not already part of their sexual repertoire. The conclusion also clashes with more recent findings which show that sexually inexperienced persons readily accept and are willing to practice particular sexual behaviors that they have witnessed on the screen (e.g., Wishnoff, 1978). Most importantly, however, the findings reported by Mann et al. seem of

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little consequence for considerations of public health because effects of pornography on sexual behaviors are, in general, not feared to produce socially undesirable effects. The instigation of sexual interest and desire, as well as the likely expansion of repertoires of sexual techniques through modeling (cf. Bandura, 1969, 1971), are--without visible opposition--accepted as positive effects of pornography. The notable exception is the use of pornography in the enticement of prepubertal girls and boys to take part in sexual activities with adults (Lanning, 1984). However, these uses have, for obvious reasons, not been subjected to systematic effects research.

In the Howard et al. investigation of the effects of pornography consumption on later reactions to pornography, male college students were given access to pornographic films, photographs, and readings, or they were not given such access in a control condition. This was done in 15 sessions that were distributed over a three-week period. The experimental subjects were free to choose from among these materials and from among nonerotic ones in the first 10 sessions. In the following three sessions, the original pornographic materials were replaced by new ones. In the last two sessions, the nonerotic materials were removed. Each session lasted 90 minutes, and during this time the subjects recorded their activities at regular intervals. Both experimental and control subjects were shown an explicitly sexual film prior to and following the extended exposure treatment. Eight weeks after the treatment, the experimental subjects were once more shown an explicitly sexual film. Numerous measures of sexual arousal were taken during and after exposure to the films, and a battery of self-perception and attitudinal measures was recorded following exposure.

The findings show, first of all, that the young men initially had

a strong interest in pornographic films. However, this interest faded rapidly with repeated consumption. Pornographic photographs and readings received comparatively little attention, but this attention was sustained. The eventual introduction of novel pornographic materials failed to return interest to the initial high levels. Following the unrestricted consumption of pornography in the experimental condition, subjects characterized their reactions to pornography as boredom. Although interest in pornography was maintained to some degree, the findings give no indication that frequent consumption of the materials in question fosters or facilitates favorable reactions such as enjoyment.

The analysis of the physiological data yielded results that are consistent with decreased interest or increased boredom. It revealed a loss of responsiveness as the result of frequent consumption. Exposure to an explicitly sexual film immediately after the conclusion of the longitudinal treatment produced diminished reactions of sexual excitedness. On the most direct measure of sexual arousal, penile tumescence, reduced responsiveness was obtrusively evident. Erections were less pronounced and more poorly maintained than prior to frequent exposure to pornography. Complementary measures, such as release of acid phosphatase, showed redundant changes. Sympathetic activity, a vital concomitant of sexual excitedness, also underwent parallel changes. Heart rate, respiration rate, and skin temperature indicated reduced responsiveness. The loss of specifically sexual responsiveness, however, appeared to be more consistent and more pronounced than that of its sympathetic accompaniment. Finally, the remeasurement of physiological reactions to pornography after a period

Figure 1

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of eight weeks, during which subjects were not treated in any particular way, revealed some degree of recovery from the loss of responsiveness. But more importantly, this responsiveness remained markedly suppressed. The findings on erection are characteristic. They are summarized in Figure 1.

The investigation reported by Howard et al. is not without problems. In the 10 initial exposure sessions, subjects' choice of pornography was severely limited. What appeared to be a loss of interest in pornographic films is more likely the result of subjects having exhausted the pool of available films. As the subjects themselves had to record their consumption choices, it is additionally likely that they experienced evaluation apprehension and avoided giving the impression of excessive erotic interest and eagerness by not watching the films repeatedly. The conclusions about rapidly growing disinterest in and boredom with pornography that were drawn under these circumstances, together with the authors' insinuation that interest in pornography is self-corrective, can only be considered highly tentative. In fact, these conclusions were proved wrong by subsequent research yet to be described. Additionally, the projection of growing boredom and disinterest is quite obviously faulted by the continued commercial success of pornography as a genre of entertainment. What the study does show, with some degree of rigor, is that consumers of pornography grow tired of watching the same materials repeatedly (see also Kelley, 1982).

The observation of diminished excitatory responding, in terms of both specifical sexual arousal and accompanying sympathetic activity, is not compromised by these procedural difficulties, however. Eventually, subjects were virtually forced to consume pornography (in the later sessions); and the intended, strong difference in

pornography consumption between the experimental and control groups was accomplished. The demonstration of substantial, enduring habituation effects of prolonged pornography consumption, then, is not in doubt. The consequences for public health are not immediately apparent, however. Habituation of excitatory reactivity might be specific to erotic entertainment and merely reduce enjoyment of the material. Pornographic materials might also start to fail as convenient arousers for sexual activities of parties exploiting them in this capacity. On the other hand, the lessened excitatory reaction to erotic entertainment might generalize, to some degree, to erotic stimuli employed as arousers in actual, intimate, sexual settings. But these possible consequences have not been explored systematically.

A point to be made in this connection is that the enduring physiological changes that result from prolonged exposure to pornography are, in all probability, not modifiable by intervention techniques of "mere talk" (that is, by cautioning subjects to be on guard, by making them aware of the behavioral changes that occurred, and/or by debriefing them in the sense of telling them how they should undo and correct influences, and how, ideally, they should behave). Abstinence from pornography offers itself as a viable behavior-modification strategy for the regaining of the lost responsiveness--if such regaining of sensitivity to pornographic materials is deemed desirable. However, strategies of this kind also have gone unexplored.

The excitatory, attitudinal, and perceptual consequences of prolonged consumption of pornography were further explored in an investigation by Zillmann and Bryant (1982, 1984). In contrast to the experiment conducted by Howard et al., both male and female subjects were employed and exposure to pornography was strictly controlled.

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Subjects came to six exposure sessions in consecutive weeks. In each session, they saw (a) six pornographic films, (b) three pornographic and three innocuous films, or (c) six innocuous films. The pornographic films were taken from a super-8 color series called "Swedish Erotica." They depicted heterosexual activities among consenting adults in all conceivable manifestations. However, they did not involve sadomasochistic acts or anything, such as bondage, that could be construed as nonvoluntary or coercive behavior on someone's part.

One week after the last exposure session, subjects' excitatory and evaluative responses to three additional films were ascertained. The films featured (a) sexual activities in a suggestive fashion (as characteristic of R-rated material), (b) common sexual activities in graphic detail (X-rated), and (c) uncommon sexual activities in graphic detail (X-rated sadomasochistic ventures and bestiality). Similar assessments were made two weeks after the exposure treatment. Finally, in the third week after the treatment, the subjects participated in a purportedly independent study said to be conducted for the American Bar Association. Subjects dealt with a case in which a female hitchhiker was raped. They recommended the prison term, in years and months, they thought was fair and most appropriate under the circumstances. Eventually, subjects estimated the popularity of sexual practices among all sexually active American adults and reported their concerns about the impact of pornography.

The findings regarding excitatory and evaluative changes are summarized in Figures 2, 3, and 4. Figure 2 shows the habituation of

Figures 2, 3, and 4

excitatory responding in terms of systolic blood pressure. Other

measures of sympathetic activity proved redundant. Predictably, the strongest habituation occurred for stimuli that had been massively consumed. Also predictably, habituation generalized, to some degree, to less explicit portrayals of common sexual activities. The total lack of generalization to uncommon and, hence, relatively novel sexual practices in pornography was not expected, however.

Figure 3 shows that prolonged exposure to common pornography reduces initial reactions of repulsion. Figure 4 shows that this loss of repulsion does not necessarily translate into increased enjoyment. Prolonged consumption of common fare fostered more favorable evaluations of portrayals of uncommon sexual practices only. Because intense enjoyment hinges on heightened sympathetic activity (cf. Zillmann, 1980), the diminished excitatory reaction to suggestive and common material presumably resulted in flat pleasurable reactions, if not in disappointment.

The same response patterns were observed in the second week after the initial exposure treatment. As the findings reported by Howard et al. had suggested, the duration of excitatory habituation is indeed substantial. Related evaluative consequences appear to be similarly enduring.

The rape case, presented three weeks after the habituation treatment, produced remarkably strong and partly unexpected effects.

Figure 5

As can be seen from Figure 5, prolonged consumption of common, nonviolent pornography trivialized rape as a criminal offense. After prolonged exposure to messages that depict women as sexually insatiable, as socially nondiscriminating in the sense that they seem eager to accommodate the sexual desires of any man in the vicinity,

and as hypereuphoric about any kind of sexual stimulation, men apparently find exaggeration in the trauma of rape and consider lesser prison terms appropriate. This outcome was expected. Unexpected was the finding that women become similarly lenient with rapists, although they treat them altogether more punitively than do men. The public-health implications of these findings, then, do not only concern the evaluation of rape as a most fundamental violation of human rights, but also the self-concept of women as a gender--in addition to the perception of women's sexuality by men.

Regarding the perception of sexuality in general, subjects with prolonged exposure to pornography, as Figure 6 shows, overestimated

Figure 6

the popularity of all less common sexual practices. This shift in the perceived normalcy of sexual behaviors can be expected to promote tolerance toward behaviors deemed "deviant" by others. However, specific evaluations that could validate such a proposal were not collected. The investigation entailed, instead, measures of callousness toward women generally, as well as measures of subjects' concern about the impact of pornography on society. Prolonged consumption of pornography was found to promote men's callousness toward women and to diminish concerns about pornography's impact in both genders (e.g., subjects came to believe that minors would not suffer undue emotional distress from exposure to pornography and that restrictions are largely inappropriate and unnecessary).

Linz (1985; see also Linz, Donnerstein, & Penrod, 1984) conducted investigations to clarify the mediation of men's callousness toward women. In a first study, male subjects were exposed to violent, female-victimizing, but nonpornographic films such as "Texas Chainsaw

Massacre." Subjects watched one movie on five consecutive days. Immediately after the last showing, they participated in a rape trial. Subjects dealt with a case in which an encounter between strangers in a bar eventually led to the sexual assault.

The first- and last-day films were counterbalanced to allow assessments of diminishing sensitivity to violence. Subjects evaluated numerous aspects of each film after exposure. The comparison of these evaluations shows that men came to report fewer emotional disturbances from the same films when shown last (i.e., after four similar others). Such habituation also manifested itself in the perception of lesser violence and diminished degradation of women. This perceptual shift was carried into the subsequent trial. Men who had consumed the series of violent films, compared to men without such exposure, came to judge the victim of violent assault and rape as having suffered less, as having been injured less, but also as now being less worthy altogether.

A second study compared the effects of repeated consumption of R-rated violent films, of R-rated sexual films, and of X-rated nonviolent pornography. Exposure was either to two or, as before, to five films. Film ratings were obtained immediately after exposure, but the rape trial was delayed to the second day after exposure to the last film. Additionally, the subjects were recruited independently and had to come to a different building. The case was altered also. It now involved the alleged rape of a woman at a fraternity party.

Concerning the perception of rape and its victims, this second study shows, as did the first, that the consumption of violent material occasions a loss of sympathy with and compassion for the victims of sexual assaults (i.e., less injury, less worth). The additional finding that subjects who had consumed R-rated sexual

movies or X-rated nonviolent pornography had similar effects was unexpected. Donnerstein (1984a) conceded: "What we consistently find is" that "those subjects ... who have seen the R-rated films, the X-rated films or the X-violent films, perceive less injury on the part of the victim (p. 92)." According to Linz's studies, then, sexual themes desensitize men toward rape victims just as strongly as do violent themes with sexual undercurrents. In fact, the findings show that the desensitization effect was the strongest for nonviolent pornography (cf. Donnerstein, 1984a, p. 92). Nonviolent pornography thus must contain information that promotes callousness in men toward sexually victimized women.

Weaver (1986) conducted an investigation to determine exactly which stimuli within violent and/or erotic entertainment produce the callousness in question. Male and female subjects were exposed to nonviolent and nonerotic scenes in a control condition, to scenes featuring lovers enjoying sexual activities, scenes featuring nymphomaniacal escapades, scenes featuring rape, or scenes featuring the terrorization of women without involving clearly sexual threats. Subjects later participated in ostensibly independent legal research, dealing with a case of physical abuse of a female cohabitant and with a case of rape. Exposure to the films was of no consequence for the damage suit. Judgments of appropriate punishment for rape were greatly affected, however. Compared with the control condition, exposure to the film depicting women as sexually insatiable and socially nondiscriminating--which, it should be noticed, is a most salient theme in nonviolent pornography--reduced recommended incarceration terms most strongly (by 37%). Rape and terror had intermediate effects (28% reduction). Lovers' sex, finally, had only an insignificant effect (11% reduction). These effects were rather

uniform across gender of respondent. The only discrepancy occurred in the terror condition. In this condition, females were highly punitive toward the rapist, but men were not.

The findings show, first of all, that particular sexual cues that are entirely devoid of violence are indeed potent mediators of sexual callousness toward women. Second, they show that the terrorization of women fosters such callousness in men. Third, they suggest that not all nonviolent erotica are equally involved in the mediation of callousness concerning rape and its victims.

The research conducted by Linz (1985) thus helped to establish evaluative components of rape callousness. It failed in another regard, however. Exposure to the various erotic and violent materials failed to influence punitive recommendations appreciably. The same is the case with a subsequent study by Kafka (1985) involving female instead of male respondents. In this study, subjects were exposed to a violent, a sexually violent, or a pornographic movie in four consecutive days. They participated in the fraternity party rape trial on the fifth day. The main finding was that women, after consuming violent fare, thought it less likely that they themselves could become victims of violence. The same group also showed little sympathy for the rape victim in the trial. However, punitive recommendation again did not differ as a function of exposure to the different genres of film.

These null results can be viewed as failures to replicate earlier findings. The question is: Why did Linz and Kafka fail to obtain positive findings? One way out of this is to deny failure and to allege that earlier positive findings were artificial. This was quickly suggested by arguing that subjects detected a connection between the exposure treatment and the rape trial and thought to

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please or thwart the experimenter by rendering verdicts that did not truly reflect how they felt about the rapist. Although this kind of argument favors null effect by projecting inflated error variance, some thought it to explain specific effect patterns. Because in the initial demonstration of diminished punitiveness toward rapists the same experimenter administered the exposure treatment and the trial in the same building, while in the null-result studies experimenter and building were varied from the first to the second part of the experiment, it was deemed conceivable that subjects came to entertain notions about the connectedness in the former situation.

To rule out the possibility that sameness of experimenter and locale created the effects reported by Zillmann and Bryant (1982). Bryant (1986) conducted an investigation in which experimenter and locale were systematically varied. Subjects were exposed to pornography on five consecutive days and participated in the rape trial two days later. For the first and the second part of the study, they dealt either with the same experimenter or with different experimenters, and they did so either in the same building or in different buildings. Compared with a control condition in which subjects consumed innocuous material instead of pornography, punitive behavior toward the rapist was reduced in all pornography conditions. Sameness of experimenter and locale contributed to this effect. But most importantly, incarceration recommendations in the different experimenter, different locale condition were significantly below those in the control condition.

Bryant's findings show that the trivializing effect of prolonged consumption of pornography on rape as a criminal offense is not an artifact of procedure. It is robust, and its experimental demonstration is replicable. Linz's and Kafka's failure to obtain

differences in punitiveness thus must result from alternative procedural features of their research. At least three of them stand out as likely candidates: (a) In contrast to the earlier used case in which rape was brutal and never in doubt, the cases used by Linz and Kafka were highly ambiguous. The rapist enjoyed some mitigating circumstances. The initial issue was, in fact, his guilt or nonguilt dependent on whether, in the subjects' perception, rape had or had not occurred. Such ambiguity can only increase error variance and therefore must be considered to favor null effects. (b) Subjects rated each film on numerous aspects of violence and sex, and they determined how demeaning each film was to the one or the other gender. Such assignments must have created a high degree of awareness about what the investigators considered important media influences, and subjects may have guarded against these influences. (c) Prior to rendering a verdict, the subjects had to respond to empathy questions concerning rapist and victim. Subjects who initially may have felt little sympathy for the victim may well have become sympathetic after responding to such empathy requests. Under these procedural circumstances, the null results should be expected rather than come as a surprise.

Zillmann and Bryant (1986a, 1986b, *in press*) conducted a series of investigations into effects of prolonged consumption of pornography that go beyond callousness in connection with rape and its victims. Specifically, they explored the implications of such consumption for (a) perceptions and attitudes concerning sexually intimate relationships, especially marriage and the family as essential societal institutions, (b) personal happiness and sexual satisfaction, and (c) possible shifts in erotic appetite.

The experimental paradigm was much the same as that of the

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earlier work (Zillmann & Bryant, 1982, 1984). Both male and female subjects consumed either nonviolent pornography or innocuous materials in hourly sessions in six consecutive weeks. An intermediate exposure condition was not employed, however. Instead, efforts were made to expand the generalizability of findings by representing nonstudents in addition to students. Nonstudents were recruited in strict adherence to procedures of random sampling. The withdrawal rate upon revelation of the nature of the research was substantial, however. As a result, the findings on nonstudents can not be considered representative of the adult population at large. A final change concerns the pornographic materials: Instead of films, the latest color & sound videocassettes were acquired from rental stores. But the materials were screened, as before, to assure that none of the depicted behaviors were violent or coercive or could be construed in these terms.

One week after the exposure treatment, subjects participated in ostensibly unrelated work on the American family and aspects of personal happiness. They responded to a Value-of-Marriage Survey and completed the Indiana Inventory of Personal Happiness. Shifts in pornographic preferences were ascertained in the second week after the exposure treatment.

The impact of prolonged consumption of pornography on the evaluation and desirability of marriage, family, and children was explored for its apparent implications for public health. The nuclear family is generally considered vital for societal welfare (e.g., Reiss, 1980). In terms of educational efforts, the family concept seems universally endorsed. Its values are rarely allowed to be challenged. Yet the values expressed in pornography clash so obviously with the family concept, and they potentially undermine the

traditional values that favor marriage, family, and children.

Even a cursory look at pornography makes this very clear.

Pornographic scripts dwell on sexual engagements of parties who have just met, who are in no way attached or committed to one another, and who will part shortly, never to meet again. Not by accident, the parties involved accept no curtailing rules for their social and sexual conduct, enjoy sexual stimulation for what it is, and do so at no social or emotional expense. Sexual gratification in pornography is not a function of emotional attachment, of kindness, of caring, and especially not of continuance of the relationship, as such continuance would translate into responsibilities, curtailments, and costs.

Irrespective of the merits or demerits of the projection that much gratification is accessible from sexual activities involving unattached others, the projection is diametrically opposed to the values that promote enduring social aggregations, especially those that are to serve reproduction. Enduring intimate relationships curtail personal freedoms to some degree. Relationships that provide economic and emotional security are based on responsibility, if not on sacrifice. And where, in such a relationship, sexuality is vital and valued, partners tend to lay claim to exclusive sexual access. Finally, the decision to have a child or children, whether by a married couple or by persons otherwise aggregated, is probably the greatest responsibility that human beings accept. It amounts to restricted freedom, servitude, and to enormous expenditures for a good portion of adult life. If sexuality is considered part and parcel of such enduring relationships, there can be no question that it comes at a forbidding price. In terms of sheer recreational sexual joy, then, these relationships compare poorly with the short-lived ones that are continually exhibited in pornography--those that invariably show that

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great pleasures can be had at next to no cost. Prolonged consumption of entertainment with clear messages of this kind thus must be expected to impact profoundly the perception and evaluation of sexuality and its social institutions and arrangements.

Strong perceptual and attitudinal changes were indeed observed. The perception of the very nature of sexuality changed. As can be seen from Figure 7, promiscuity in both men and women was deemed more

Figure 7

natural after prolonged consumption of pornography than without such consumption. The effect was uniform for male and female respondents and for students and nonstudents. Beliefs in the faithfulness of sexual partners predictably declined with the greater acceptance of promiscuity.

Various attitudinal changes are shown in Figure 8. Prolonged

Figure 8

consumption of pornography fostered greater acceptance of pre- and extramarital sexual relations for self and intimate partners. Along with that, it fostered acceptance of sexually nonexclusive relations with partners. Prolonged consumption also led to greater acceptance of the myth of health risks from sexual repression. Pornography apparently manages to convey the idea that unrestrained sexuality is wholesome and healthy, and that any restraint poses risks. All these effects are uniform for men and women, students and nonstudents. Additionally, prolonged consumption of pornography was found to counteract gender equality. For intimate relationships, male dominance was favored over egalitarianism. This effect was also uniform for the various groups. Overall, however, females embraced

egalitarianism more than did males, and students embraced it more than did nonstudents.

Pornography consumption had a most powerful effect on evaluations of the desirability and viability of marriage. Endorsement of marriage as an essential institution dropped from 60.0% in the control groups to 38.8% in the treatment groups. The effect was again parallel for males and females, students and nonstudents.

The most astonishing effect of prolonged pornography consumption on family values, however, concerns the desire to have children. As can be seen from Figure 9, exposure to pornography reduced the desire

Figure 9

to have children, and it did so in a uniform fashion. Male and female respondents, students and nonstudents alike, wanted fewer children on the average. The desire to have male offspring dropped 31%. The desire for female offspring, being lower overall, dropped by about twice that margin: 61%. This reduction proved specific to gender. Male respondents expressed little desire for female offspring altogether. It is the desire of females for offspring of their own kind that, after consumption of pornography, shrank to one third of its normal strength (see right-hand side of the graph).

These findings suggest that prolonged consumption of pornography, presumably because it continually projects the attainment of sexual joy without acceptance of social confinements and obligations, indeed makes having children and raising a family appear an unnecessary inconvenience. But such reasoning explains only the overall reduction in reproductive desire. It leaves unexplained the discrimination against female offspring by women. Exactly what, within pornography, inspires this own-gender discrimination remains unclear.

Effects - 20-

The Indiana Inventory of Personal Happiness generated clear-cut findings. None of the items unrelated to sexuality showed differences in happiness or satisfaction. In stark contrast, all items pertaining

Figure 10

to sex were impacted. Prolonged consumption of pornography reduced sexual satisfaction and sex-related personal happiness markedly, and it did so uniformly. The separation of elements of sexual satisfaction and happiness into an affective component (i.e. loving, caring), on the one hand, and into sexual activities as such, on the other, made it clear that satisfaction with sexual specifics--the looks of intimate partners, their sexual performance, and their willingness to engage in novel sexual activities--had suffered the most.

The findings point to a paradox. Presumably, pornography is initially consumed in hopes of increasing sexual satisfaction. But consumers eventually compare appearance and performance of pornographic models with that of their intimate partners, and this comparison rarely favors their intimate partners. The result is the realization that, in sexual matters, others may be more gratified. Dissatisfaction with intimate partners and perhaps with sex at large seems the inevitable result.

The final study in this series concerned shifting preferences for pornography. Two weeks after the exposure treatment, subjects returned once more to the laboratory. An unavoidable delay was announced, and they were ushered into the office of a research assistant that was equipped with a monitor, a cassette player, and numerous cassettes. They were encouraged to watch cassettes from his collection while waiting. The cassettes contained movies that were

G- and R-rated. However, some cassettes were X-rated and featured common nonviolent pornography, bondage, sadomasochism, or bestiality. The subjects' consumption of the various cassettes was unobtrusively monitored.

As Figure 11 shows, subjects with prolonged exposure to common pornography expressed virtually no interest in this common form of

Figure 11

pornography. The males moved almost exclusively into pornography depicting less common sexual practices. Females showed the same preference, but to a markedly lesser degree.

The findings demonstrate that consumers of pornography that depicts the more common forms of sexuality are not likely to limit themselves to these forms when given the opportunity to consume material featuring less common sexual practices, including sadomasochistic and violent sexual behaviors. This shift in preference can be expected on the basis of satisfied curiosity about common sexuality as well as on the basis of excitatory habituation to frequently consumed fare. Pornography featuring the uncommon, in contrast, is still met with curiosity, and probably more importantly, it is still capable of producing sexual excitedness. Surely, some erotica connoisseurs will be nostalgic about so-called mild stimuli. But the research projects that, as a rule, consumers will advance to extreme material before, perhaps, reaching dead end and returning to whatever erotica in their recollection fostered the most gratifying sensations. With regard to young consumers, it can only be speculated at this point that they are likely to be more strongly motivated by curiosity than by excitatory habituation. This does not detract from the fact, however, that they are also inclined to go beyond the common

and seek exposure to the less common sexual expressions, including aberrations--violent ones, in particular. For older consumers, a preference shift toward violent erotica, specifically, is to be expected, because witnessed violence is sympathetically arousing and, hence, well suited to supplement fading excitement (owing to habituation) with pure erotica (cf. Zillmann, 1986).

Bryant (1985) conducted an investigation to show that prolonged consumption of common pornography influences moral judgment concerning sexual behaviors specifically. Male and female subjects consumed pornography or innocuous material in one-hour sessions in five consecutive days. Two days later they participated in an ostensibly unrelated study in which they evaluated the moral indefensibility of numerous nonsexual and sexual improprieties and transgressions. Subjects indicated the degree to which they thought a particular social behavior was morally right or wrong.

Exposure to pornography proved to be without consequence for the moral judgment of nonsexual behaviors (e.g., drunken driving, shop lifting). In contrast, it greatly influenced the judgment of improprieties in the sexual realm (e.g., self-advancement through sexual favors, cover-up of homosexual relations to a heterosexual lover). Specifically, it consistently relaxed the moral verdict on behaviors that were deemed dishonest or immoral by those without the exposure in question.

The investigation connects with the earlier work on the perceived popularity of sexual practices as well as with that on the growing acceptance of sexual freedoms in socially confined situations, such as marriage. Pornography's impact on the perception of sexual behaviors--their overestimation, in particular--apparently grants these behaviors greater normalcy and, therefore, greater moral

legitimacy. The observation that the morality manifest in pornography finds expression in the moral judgment of sexual conduct generally is consistent with such an interpretation.

Finally, Check (1985b) conducted a most informative study in connection with the Fraser Committee on Pornography and Prostitution in Canada. Unlike the studies by Linz (1985) and Kafka (1985) in which pornography was secondary to R-rated horror films, Check's investigation focuses on pornography proper and applies the violent-nonviolent distinction within pornography proper.

Three content classes were distinguished: nonviolent erotica, nonviolent dehumanizing pornography, and sexually violent pornography. Nonviolent erotica portrayed sexual behaviors free of "objectionable elements." As part of the material was taken from sex-education and sex therapy programs, the depicted behavior could be deemed ideal, if not idealized. Nonviolent, dehumanizing pornography entailed scenes such as a man sitting atop a woman, masturbating, and ejaculating into her face. Sexually violent pornography, finally, featured events such as the penetration of a woman with an oversize plastic penis while she was strapped to a table.

Because the labels of these forms of pornography have created confusion and misunderstandings already (e.g., Check, 1985a; Zillmann & Bryant, *in press*), clarification seems in order. The qualifier "dehumanizing" suggests a class of erotic stimuli somewhere between pornography and violent pornography. It also implies that most pornography is not dehumanizing. In fact, this has been assumed to be the case in the interpretation of Check's findings. Yet, commonly available pornography abounds with events such as masturbation into the face--which is usually followed by the female's pleasureful ingestion of sperm. Systematic content analysis leaves no doubt about

it (Palys, 1984). Some parties might well find behavior of this kind demeaning to someone. Others might object to the depiction of rear-entry coition. Where should one draw the line? On the one hand, then, the judgment of what is dehumanizing to whom and what is not is far too value-laden to be workable. On the other hand, it appears that what is referred to as dehumanizing pornography is nothing other than common pornography. It is the class referred to as nonviolent erotica that is uncharacteristic, as it is devoid of so-called entertainment value. We thus shall substitute labels and refer to nonviolent erotica as good-sex or ideal pornography and to nonviolent, dehumanizing pornography as common pornography. We shall maintain the label violent pornography, however, although it is debatable whether consented-to sadomasochistic scenarios--such as the one specified--qualify as violent or even coercive.

In Check's investigation, male students and nonstudents (a nonrepresentative sample similar to that in the study by Zillmann and Bryant, *in press*) came to three exposure sessions that were scheduled within one week or two weeks. Subjects consumed a 30-minute tape of one of the three kinds of pornography each session. On average four to five days later, they participated in a test session in which the impact was ascertained. A control group participated in this test session only. The effects of interest were sexually aggressive attitudes, the inclination to coerce and force women into unwanted sexual acts, and the proclivity for rape. The measures were mainly those developed by Malamuth (1981).

Prolonged exposure to pornography influenced both the reported likelihood of coercing women into unwanted sexual acts and, more importantly, the reported likelihood of committing rape. As can be seen from Figure 12, the likelihood of forced sexual acts increased

significantly after prolonged consumption of common pornography. Increases after consumption of ideal pornography and violent pornography are apparent, but were not reliable. The effect pattern

Figures 12 and 13

for rape proclivity proved to be similar, yet different. Both common and violent pornography increased the reported likelihood of committing rape significantly and to the same degree. The apparent increase from consumption of ideal pornography again failed to be reliable.

The investigation by Check has obvious implications for public health. It shows that, on the whole, common nonviolent pornography has the strongest influences on men's willingness to force intimate partners into forms of sexuality that are not necessarily to their partners' liking and on the propensity for forcing sexual access altogether. Violent pornography apparently has the same power to increase rape proclivity, but its influence on the coercion of specific sexual acts is limited, if not negligible. Sex-idealizing pornography is the only form without clear-cut effects on the readiness for sexual coercion and on rape proclivity. But even here caution is indicated, because the effect is consistently intermediate and clearly in the same direction as that from the other forms of pornography. Although the effect is not reliably above the control condition, it is never reliably below the effect of these other forms either.

Check's investigation provided further useful information. Subjects were classified in terms of psychoticism (Eysenck & Eysenck, 1976). Persons high on psychoticism are known to be rather solitary and hostile, to lack empathy and to disregard danger. They also are

known to prefer impersonal, noncaring sex (Eysenck, 1976). Subjects scoring comparatively high on the psychotism scale (but not high enough to meet clinical criteria) were those greatly influenced by common nonviolent and violent pornography. In contrast, subjects scoring low on this scale were only negligibly affected. This effect pattern is shown in Figure 13.

A final observation of interest concerns heavy consumers of pornography. The findings reported by Check show that continued consumption of common pornography by those already in the habit of consuming such material fosters significant increases in rape proclivity. The same exposure was without appreciable impact for persons not taking a strong interest in erotica. Considering the propensity for rape, then, those who take a keen interest in erotica seem to constitute the population at risk of becoming coercive and violent in their sexuality.

Summary of Effects

The experimentally demonstrated effects of prolonged consumption of pornography can be summarized as follows:

(a) Excitatory responses to pornography, both specifically sexual and general ones, diminish with prolonged consumption. Some degree of recovery occurs spontaneously. It remains unclear, however, which conditions might facilitate or hamper such recovery.

(b) Repulsion evoked by common pornography diminishes and is lost with prolonged consumption.

(c) Prolonged consumption of common pornography does not lead to increased enjoyment of the frequently consumed material. Only less common forms of pornography that depict less common forms of sexuality tend to elevate enjoyment.

(d) Prolonged consumption of common pornography fosters a

preference for pornography featuring less common forms of sexuality, including forms that entail some degree of pseudoviolence or violence.

(e) Prolonged consumption of common pornography distorts perceptions of sexuality. Specifically, it fosters presumptions of popularity for all less common sexual practices and of health risks from sexual hypoactivity.

(f) Prolonged consumption of common pornography promotes increased acceptance of pre- and extramarital sexuality. Although it increases distrust among intimates, the violation of sexual exclusivity is more readily tolerated. Moral condemnation of sexual improprieties diminishes altogether.

(g) Prolonged consumption of common pornography spawns doubts about the value of marriage as an essential societal institution and about its future viability.

(h) Prolonged consumption of common pornography leads to diminished desire for progeny. The strongest effect of this kind concerns the desire of females for female offspring.

(i) Prolonged consumption of common pornography breeds discontent with the physical appearance and the sexual performance of intimate partners. To a lesser degree, it breeds discontent with these partners' affectionate behavior.

(j) Prolonged exposure to nonviolent and violent pornography promotes insensitivity toward victims of sexual violence.

(k) Prolonged consumption of common pornography trivializes rape as a criminal offense.

(l) Prolonged consumption of nonviolent and violent pornography, especially of the former, promotes men's propensity for forcing particular sexual acts on reluctant female partners.

(m) Prolonged consumption of nonviolent and violent pornography

Effects - 28-

increases men's propensity for committing rape. This effect is pronounced for normal men manifesting some degree of psychoticism; it is negligible for men with minimal psychotic tendencies.

(n) Habitual consumers of common pornography, in contrast to occasional consumers, are at risk of becoming sexually callous and violent.

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Figure Captions

Figure 1. Habituation of sexual arousal. From Howard, Reifler, and Liptzin, 1971.

Figure 2. Habituation of sympathetic excitation. From Zillmann and Bryant, 1984.

Figure 3. Diminution of repulsion. From Zillmann and Bryant, 1984.

Figure 4. Enjoyment changes. From Zillmann and Bryant, 1984.

Figure 5. Incarceration recommendations for rape. From Zillmann and Bryant, 1982.

Figure 6. Perceptual consequences. From Zillmann and Bryant, 1982.

Figure 7. Further perceptual consequences. From Zillmann and Bryant, 1986a.

Figure 8. Attitudinal consequences. From Zillmann and Bryant, 1986a.

Figure 9. Reproductive desire. From Zillmann and Bryant, 1986a.

Figure 10. Effects on sexual satisfaction. From Zillmann and Bryant, 1986b.

Figure 11. Changing erotic preferences. From Zillmann and Bryant, in press.

Figure 12. Reported proclivity for coercion of sexual acts on uncooperative partners (circles) and for rape (squares). Data points not sharing a letter differ significantly in comparisons along gradients. From Check, 1985b.

Figure 13. Reported rape proclivity as a function of psychoticism. Data points not sharing a letter differ significantly in comparisons along gradients. From Check, 1985b.

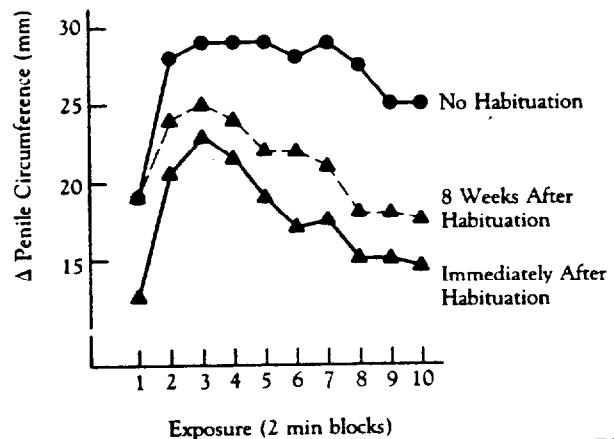


Fig.1

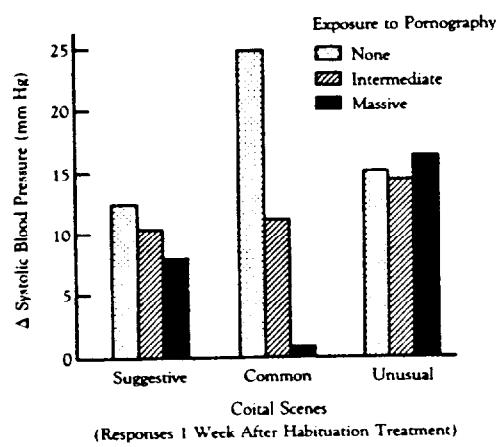


Fig.2

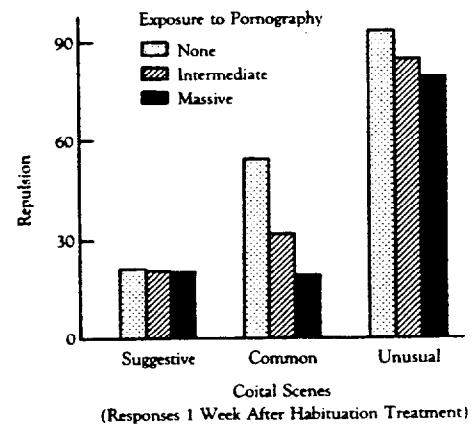


Fig. 3

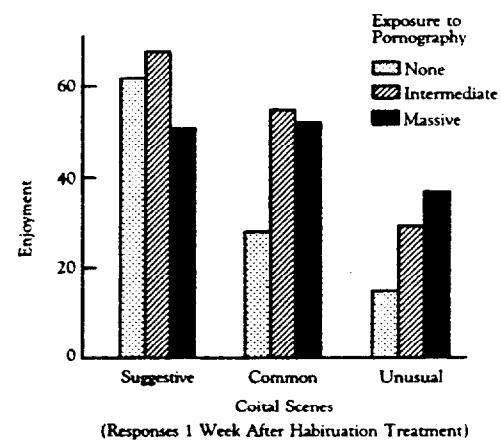


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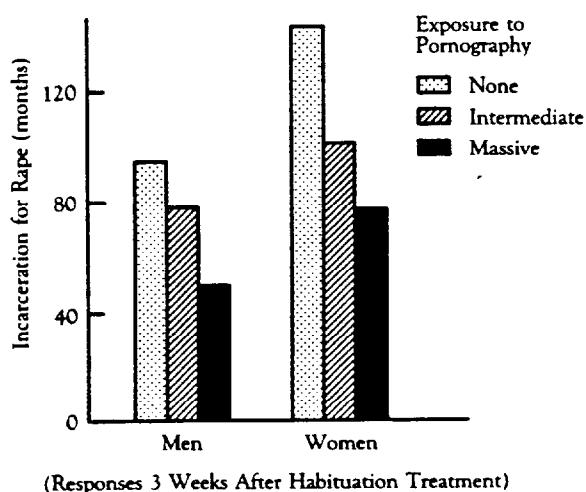


Fig. 5

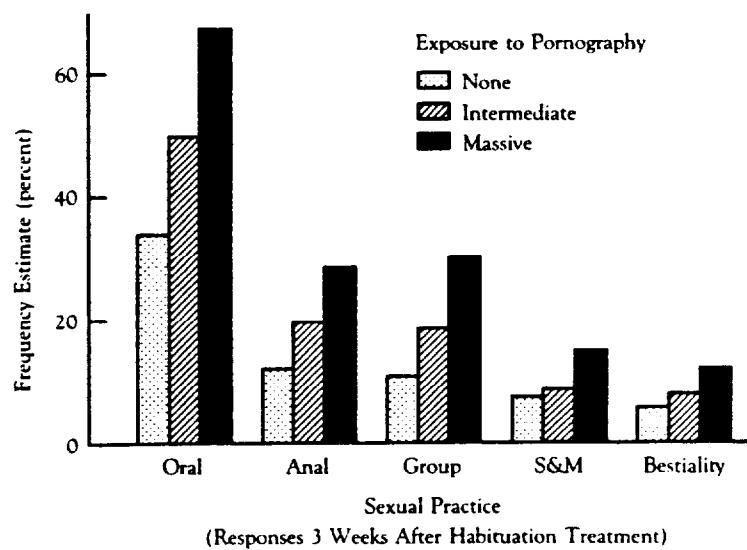


Fig. 6

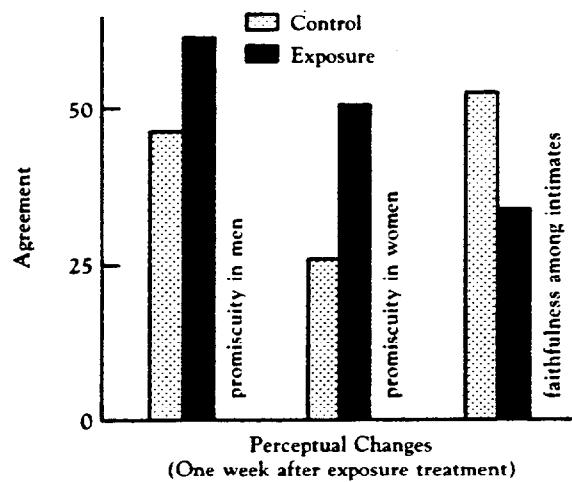


Fig. 7

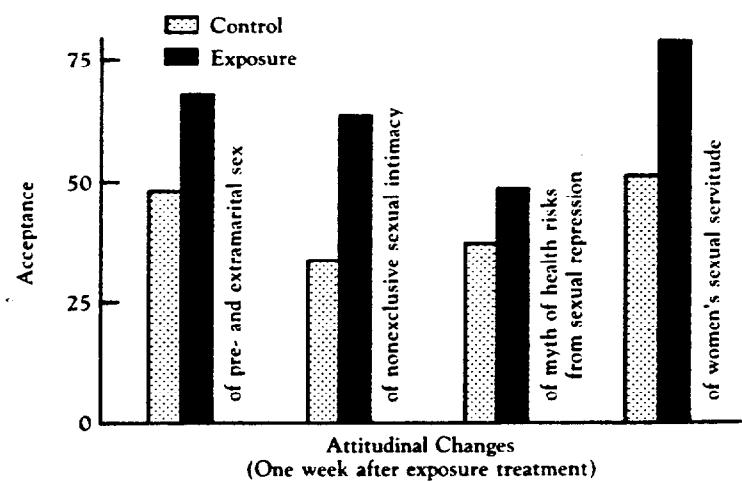


Fig. 8

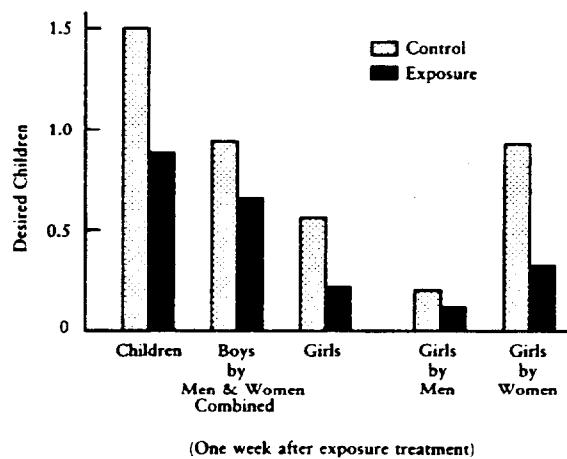


Fig. 9

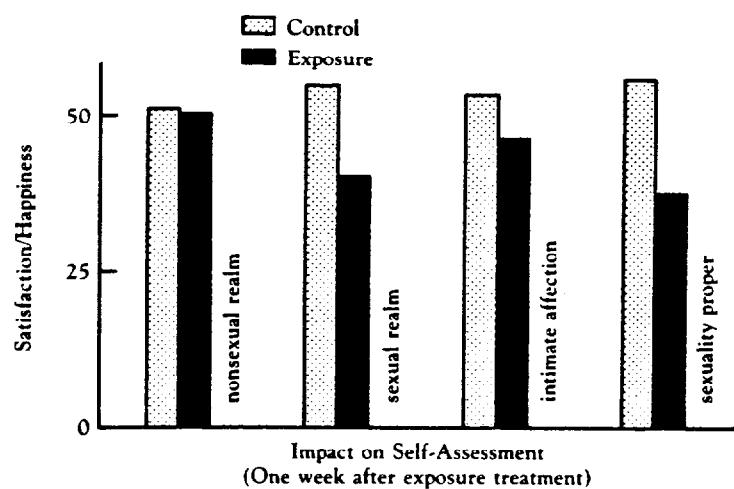


Fig. 10

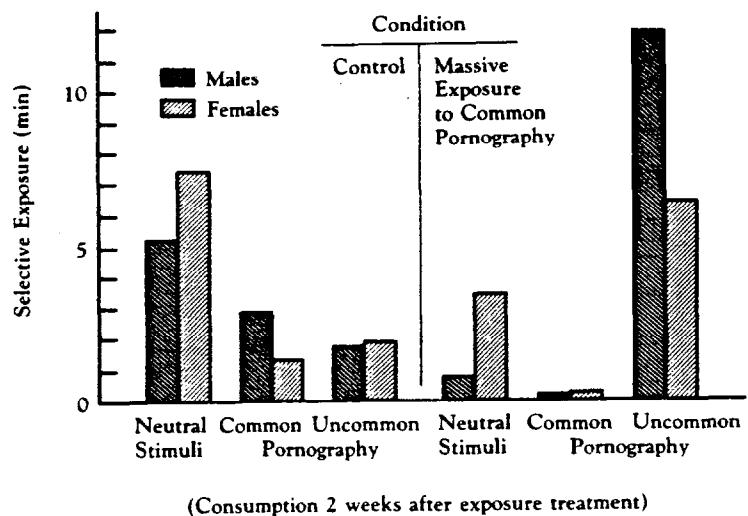


Fig.11

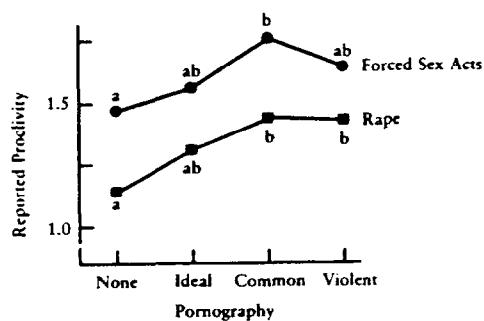


Fig.12

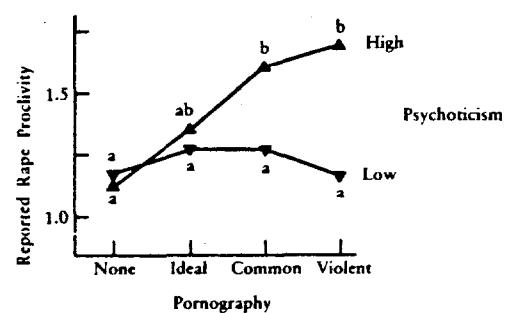


Fig.13

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DO SEXUALLY VIOLENT MEDIA INDIRECTLY CONTRIBUTE
TO ANTI SOCIAL BEHAVIOR?

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Running Head: Sexually Violent Media

DO SEXUALLY VIOLENT MEDIA INDIRECTLY CONTRIBUTE TO
ANTISOCIAL BEHAVIOR?¹

Introduction: The Indirect Effects Perspective

The research described below has focused on violent sexual media, particularly rape.² It demonstrates the importance of analyzing media stimuli by the "messages" or meanings they convey. Meaning is, of course, a function of both the message and the receiver's interpretations of it.

The message given the most attention here involved the consequences of sexual aggression. A series of experiments found that rape depictions that showed the victim ultimately deriving physical pleasure from her experience fostered attitudes more condoning of aggression against women. Rape depictions that portrayed the victim abhorring the experience, on the other hand, were less likely to have such effects.

According to these findings, a PG-rated film showing rape in a positive light could be more socially detrimental than an X-rated film not showing sexual violence. The degree of sexual explicitness, according to this approach, is less relevant than the "message" behind the depiction of sexual aggression.³

Besides discriminating among differing "messages" in studying media stimuli, the research presented differentiates

among media consumers. No influence works in a vacuum and media influences are viewed as combining and interacting with a variety of other influences -- sometimes counteracting them, sometimes reinforcing them and at other times not having much of any effect.

The current strong interest in exploring a possible relationship between pornography and crime has led to a search for direct links between media exposure and deviant behavior. People have sought an immediate causal connection between media action and audience imitation. For example, a civil suit brought against NBC alleged that a rape portrayal in a television movie, Born Innocent, resulted in an imitation rape by some juvenile viewers. However, because of the ethical constraints against researchers' creating conditions that might increase serious aggression (e.g., exposing individuals to large doses of violent pornography and seeing if some commit rapes), experimentation to study direct effects can only be used to a very limited extent.

Beyond the dramatic popular notion of violent pornography spurring a minority of sexual deviants and "weirdos" to criminal acts, lies the far greyer, more complex, but also potentially far more pervasive area of indirect effects. The evidence in this paper suggests the prospect of a wide range of media affecting the general population in a variety of different ways. It looks at how an aggregate of media sexual violence could affect a person's attitudes, which are concurrently being shaped by family, peers, other media

messages and a host of other influences. Such attitudes might contribute to stranger and date rape, a not-acted-upon desire to be sexually aggressive, sanctioning the sexual aggression of others, or sexist and discriminatory acts. Even when not translated into violent behavior, such effects have wide social implications.

Figure 1

Elsewhere (Malamuth & Briere, *in press*), we described an indirect effects model of the hypothesized development of aggressive behavior against women (see Figure 1). To briefly summarize this model, individual conditions and the broader social climate are postulated as the originating influences on the individual. The mass media is considered one of the many social forces that may, in interaction with a variety of other cultural and individual factors, affect the development of intermediate attributes such as attitudes, arousal patterns, motivations, emotions, and personality characteristics. These intermediate variables, in complex interactions with each other and with situational circumstances such as alcohol or acute arousal, may precipitate behaviors ranging from passive support to actual aggression.⁴ In addition to contributing to attitude formation, the mass media may increase the recall or "prime" antisocial thoughts, feelings, and behavioral urges that were previously formed (Berkowitz, 1984).

For some individuals antisocial acts may take the form of violence that comes to the attention of the law, such as "stranger" rape or wife-battering. For others, these same underlying factors may contribute to responses that are not typically prosecuted, but instead are manifested as aggression in dating situations or in laboratory settings, a reported desire to commit acts of sexual violence, discrimination against women, and/or expressed support for the sexual aggression of others. We are not lumping illegal violence together with all other antisocial behaviors but we are suggesting that all these behaviors may share some underlying causes, including media influences.

This model indicates possible avenues by which cultural forces such as the media may change a person's intermediate responses and how such changes may ultimately affect his own aggressive behavior under some circumstances. This model also suggests that attitudinal changes of some people may affect the aggressive behavior of others. If a person becomes more tolerant of violence against women as a result of media exposure or other causal factors, for example, he may change his reactions to the sexual aggression of others even if his own aggressive behavior is not altered.

This general model does not suppose a linear sequence of events, but a reciprocating system of mutually influencing factors -- as indicated by the upward arrows in Figure 1. For example, mass media portrayals of sexual violence may contribute to attitudes and perceptions which, in combination

with personality characteristics derived from aversive childhood experiences, may result in sexual aggression on a "date." This aggression, especially if unpunished, might produce a further alteration in attitudes and perceptions (including of self), that could attract the individual to a peer network supportive of sexual aggression. These peers, themselves a product of "originating" and "intermediate" variables, might then provide greater support and approval for further sexual aggression.

We have suggested two possible routes culminating in sexual aggression. First, an individual may "progress" through the stages hypothesized to produce sexual violence. Second, mass media stimuli and other cultural influences may impact on individuals not sexually violent themselves, but who nevertheless, because of their negative attitudes toward women, support and reinforce sexual violence in others. Such support may manifest itself by blaming a rape victim, supporting another man's aggression in a "locker room" conversation, or even deciding guilt as a jury member in a rape trial. The idea of such thought patterns encouraging sexual violence is reminiscent of the "cultural climate" concept suggested by Brownmiller (1975). It argues that media influences that increase cultural supports for sexual aggression need not produce immediate violence to have seriously harmful effects. Of course, the indirect model need not be restricted to sexual aggression but may apply to nonsexual aggression as well. For example, media depictions

of violent vigilantes as heroes (e.g., the Death Wish series of movies) may contribute to a cultural climate condoning similar behavior in "real world" settings.

The indirect effects model provides the basis for this paper's twin hypotheses that 1) exposure to some sexually violent media may contribute to the development of attitudes that condone aggression against women and that 2) such attitudes, in combination with other influences and circumstances, may lead to sexually violent acts.

Hypothesized Processes Leading to Attitude Changes

Obviously, most viewers of media sexual violence distinguish between fantasy and reality and don't necessarily perceive the media as a model for behavior. However, there is considerable research indicating that even when people recognize an event as fictional, for some it can nonetheless affect their perceptions of reality and their attitudes. Such media influences may be more likely when the sexual violence is presented in a positive light or when the audience is sexually aroused by it.

Figure 2

Figure 2 summarizes several possible processes by which media sexual violence might lead to attitudes that are more accepting of violence against women. I adapted these from Bandura's (1977, 1986) description of ways by which normally

censured acts become more intellectually and emotionally acceptable. They include:

- (1) Labeling sexual violence more as a sexual rather than a violent act.
- (2) Adding to perceptions that sexual aggression is normative and culturally acceptable.
- (3) Altering perceptions of the consequences of sexual aggression. In particular, minimizing the seriousness of the consequences to the victim and reinforcing the myth that victims derive pleasure from sexual assaults.
- (4) Changing attributions of responsibility to place more blame on the victim.
- (5) Elevating the positive value of sexual aggression by associating it with sexual pleasure and a sense of conquest.
- (6) Reducing negative emotional reactions to sexually aggressive acts.

Some of the studies discussed later measure these cognitive and emotional processes.

The Anatomy of Media Sexual Violence

A comparison of sexual versus non-sexual media violence helps to isolate the characteristics of sexually violent depictions. Of course, males act against females in the vast majority of sexually aggressive depictions (e.g., Smith, 1976a, b), whereas the victim is usually male in non-sexual

portrayals of violence (Gerbner, 1972). Two other important differences distinguish sexual and non-sexual violence. First, victims of non-sexual aggression are usually shown as outraged by their experience and intent on avoiding victimization. They, and at times the perpetrators of the aggression, suffer from the violence. However, when sexual violence is portrayed, there is frequently the suggestion that, despite initial resistance, the victim secretly desired the abusive treatment and eventually derived pleasure from it. This provides a built-in justification for aggression that would otherwise be considered unjustifiable. Sexual violence is often presented without negative consequences for either the victim or the perpetrator. For example, less than 3% of the rapists in "adult" books surveyed by Smith (1976a, 1976b) suffered negative consequences and their victims were seldom shown to have regrets about having been raped. Similarly, in a recent content analysis of videos, Palys (1986) found that the majority of sexual aggressors were portrayed in a positive fashion and only seldom did their violence result in negative consequences.

The second distinction between sexual and non-sexual violence involves the element of sexual arousal. Such arousal in response to sexually violent depictions might result in subliminal conditioning and cognitive changes in the consumer by associating physical pleasure with violence. Therefore, even sexual aggression depicted negatively may have harmful effects because of the sexual arousal induced by the

explicitness of the depiction. For example, a person who views a sexually violent scene might feel that the violence is immoral but may nonetheless be sexually aroused by it. Such arousal might motivate him to rationalize the aggression or to minimize its seriousness or its consequences.

Given these issues, particular concern about sexual aggression in the media is not only based on the frequency of sexual as compared to non-sexual violent portrayals. Instead, the "positive" manner in which sexual violence is portrayed and its potential to positively link or reinforce sex and violence justifies special concern.

The research described below provides some support for the indirect effects model's two interrelated hypotheses that exposure to media depictions can help form attitudes supportive of real-life sexual aggression and that such attitudes can in turn contribute to actual aggression against women.

From Media Exposure to Antisocial Attitudes

SURVEY DATA: Several studies assessed the correlation between the degree of men's exposure to sexually explicit media and their attitudes supportive of violence against women. Such correlational studies can only reveal associations between the amount of media people reported consuming and their attitudes. They cannot indicate whether these media were responsible for their attitudes.

Unfortunately, these studies didn't distinguish between

sexually violent and sexually non-violent media. Had they focused exclusively on sexually violent media rather than pornography in general, it's likely that the links to attitudes condoning aggression would have emerged as strongly, if not stronger.

In most studies, higher levels of reported exposure to sexually explicit media correlated with higher levels of attitudes supportive of violence against women. For example, in a sample of college men, Malamuth and Check (1985) found that higher readership of sexually explicit magazines was correlated with more beliefs that women enjoy forced sex. Similarly, Check (1984) found that the more exposure to pornography a diverse sample of Canadian men had, the higher their acceptance of rape myths, violence against women, and general sexual callousness. Briere, Corne, Runtz and Malamuth (1984) reported similar correlations in a sample of college males. On the other hand, the failure to find a statistically significant correlation in another study, led Malamuth (in progress) to examine other interesting correlations.

That study asked subjects to indicate how much information about sexuality they obtained in their childhood from various sources, such as peers, parents, church, educational media, educational courses, sexually explicit media, and doctors. Pornography emerged as the second most important source of information, second only to peers. Subjects who reported obtaining more information from pornography also held attitudes more supportive of violence

against women. Such a correlation was not found with the other sources of information about sexuality. Information from some, such as educational courses, actually correlated with lower levels of attitudes supportive of violence against women. In fact, pornography's link to antisocial attitudes tended to be stronger when compared to other sources of sexual information than when measured alone.

Focusing only on quantity of exposure, therefore, may be an oversimplified approach. Pornography's degree of influence on a person may largely depend on how that exposure interacts with other influences. People raised with little education about sexuality or in families where sex was treated as "taboo," may be more susceptible to the influences of pornography than those reared with considerable education about sex (Malamuth, 1978; Malamuth & Billings, 1985). It makes sense that those with other sources of sex information can more accurately assess the myths about women and sexuality portrayed in some pornography. However, those without much sex education might be more apt to use pornography as a primary source of information.

EXPERIMENTAL RESEARCH: A growing body of experimental research complements the survey data linking media exposure to attitudes. The studies described below have shown connections between sexually violent media and attitudes supportive of sexual aggression, but have not revealed similar relations with equally explicit, non-violent stimuli which portrayed

both sexes in equal power roles. Here, it is possible to consider a causal link between exposure and attitudes because other factors have been controlled. Still, caution must be exercised in generalizing findings from controlled situations to naturally occurring settings.

Research has examined the impact of "positive" vs. "negative" rape portrayals in two ways. One series of studies assessed how either victim arousal or abhorrence at the end of a rape depiction changed the way in which the assault was perceived when the rape itself remained identical in the two versions. When the rape victim became aroused, male subjects labeled the assault more as a sexual act. They also perceived greater justification for it, reported a greater likelihood that they and other men would commit such an act, and saw the victim as more responsible for what had occurred (Donnerstein, 1984; Rapaport, 1984). These effects have been particularly pronounced for more sexually aggressive men.

These experiments show that changing the outcome of a rape affects the way it is perceived. They don't show that these perceptions carry over to rape in general. In another series of studies, the carry-over effects of perceptions of and attitudes toward rape were directly examined. These studies assessed whether rapes depicting victim arousal changed subjects perceptions of other rapes, altered beliefs about women's reactions to sexual assaults and increased the acceptance of violence against women.

In three experiments, male subjects were either exposed to depictions of mutually consenting sex, rape in which the female victim eventually became aroused, or rape abhorred by the victim. Afterwards, the subjects were shown a rape depiction and asked about their perceptions of the act and the victim. In two of the studies, those subjects exposed to the "positive" rape portrayal perceived the second rape as less negative than those first exposed to the other depictions (Malamuth, et al., 1980; Malamuth & Check, 1980). One of these studies also found that the rape depicting victim arousal led men to perceive rape as a more normative act (Malamuth & Check, 1980). Subjects in the third experiment were asked how women in general would react to being victimized by sexual violence (Malamuth & Check, 1985a). Those exposed to a "positive" rape portrayal believed that a higher percentage of women would derive pleasure from being sexually assaulted. This effect of the portrayal was particularly apparent in men with higher inclinations to aggress against women.

A fourth experiment conducted outside the laboratory yielded similar results (Malamuth & Check, 1981). Male and female undergraduates were randomly assigned to one of two exposure conditions. Participants in the experimental condition were given free tickets to view feature-length films on two different evenings that included portrayals of women as victims of aggression in sexual and non-sexual scenes. These films suggested that the aggression was justified and/or had

"positive" consequences. Subjects in the control condition were given tickets to other films on the same evenings which did not contain any sexual violence. The movies shown in both exposure conditions have been aired with some editing on national television. Subjects viewed these films with movie-goers who purchased tickets and were not part of the research. Classmates of the recruited subjects who didn't see the films were also studied as an "untreated" control group. Several days after the films were viewed, a "Sexual Attitude Survey" was administered to the entire classes. (Subjects were not aware of the relationship between this survey -- purportedly administered by a polling agency -- and the earlier movies some students had seen as part of an ostensibly unrelated study.)

Subject responses were assessed by scales developed by Burt (1980). They included Acceptance of Interpersonal Violence (AIV) against women (e.g., acceptance of sexual aggression and wife battering), Rape Myth Acceptance (RMA) (e.g., the belief that women secretly desire to be raped), and Adversarial Sexual Beliefs (ASB) (e.g., the notion that women are sly and manipulating when out to attract a man). These measures were embedded within many irrelevant items intended to disguise the purpose of the survey.

Exposure to the films portraying "positive" effects significantly increased the scores of male but not female subjects on the AIV scale.⁵ A similar pattern was observed on the RMA scale. Only the ASB scores were not at all affected.

Taken together, the data demonstrated effects sustained over time⁶ of sexually violent movies on men's acceptance of violence against women. Moreover, the results were obtained in a non-laboratory setting seemingly devoid of "demand characteristics," i.e., researchers' subtly conveying their hypotheses to subjects. Recently, Demare (1985) replicated these results using very similar procedures.

An earlier experiment by Malamuth, Reisen, and Spinner (1979) found no attitude changes following exposure to media sexual violence that didn't depict victim arousal. In the experiments showing significant media effects, the stimuli were specifically selected because they clearly depicted violence against women as having "positive" consequences. These findings suggest that certain antisocial effects may be limited to media stimuli depicting "positive" consequences of sexual aggression.

Still, sexually violent films that do not portray "positive" consequences may nonetheless affect consumers in undesirable ways. For example, Linz (1985) studied the effects of repeated exposure to X- and R-rated feature-length films portraying sexual violence with primarily negative consequences to victims. He found that these movies had desensitizing effects on viewers. In one experiment, male college students who viewed five such movies had fewer negative emotional reactions to such films. There was even a tendency for the subjects' "desensitization" to carry over to their judgments of a rape victim in a simulated trial.

presented following their exposure to the films. In a second experiment, Linz (1985) again found that males exposed to several R-rated, sexually violent films became less sympathetic to a rape victim in a simulated trial and were less able to empathize with rape victims in general.

From Attitudes to Antisocial Behavior

Although psychologists have demonstrated that there is seldom a strong, direct link between attitudes and behavior (Ajzen & Fishbein, 1977), several researchers have contended that attitudes accepting or justifying sexual aggression are an important cause of aggression against women (e.g., Brownmiller, 1975; Russell, 1984). Burt has presented the most influential theoretical perspective in this area (1978; 1980; 1983). She contends that a cultural matrix that encourages rigid sex roles and supports male dominance over females generates attitudes supportive of rape. These attitudes act as "psychological releasers or neutralizers, allowing potential rapists to turn off social prohibitions against injuring or using others" (1978, p. 282). To assess such attitudes and beliefs, Burt (1980) developed the scales used in the experiments described earlier, including the AIV, RMA, and ASB.

Studies by Malamuth and his colleagues provide some support for Burt's perspective. They show a significant relationship between Burt's rape-condoning attitude scales and men's self-reported likelihood of engaging in a wide range of

violence against women as long as the men suffered no negative consequences (e.g., Briere & Malamuth, 1983; Malamuth, 1981; 1984). However, some commentators have contended that the linkage between attitudes and actual aggressive behavior is assumed too facilely in such studies (e.g., Vance, 1985). Fortunately, several studies have recently examined this connection and have found consistently that the attitude scales can predict actual aggressive behavior. This, of course, does not mean that everyone with attitudes condoning aggression will act on them.

LABORATORY AGGRESSION: Malamuth (1983) tested whether men's attitudes could predict their aggressive behavior in a laboratory setting. He also examined whether men's arousal to rape depictions compared to their arousal to consensual sex depictions predicted laboratory aggression.

About a week after both attitudes (on the AIV and RMA scales) and sexual arousal to rape were measured, subjects participated in what they believed was a totally unrelated "extrasensory perception" experiment. In that session, they were angered by a female aide of the experimenter who pretended to be another subject. Later in the session, subjects could vent their aggression against her by administering unpleasant noise as punishment for her incorrect responses. They were told that punishment was thought to impede rather than aid extrasensory transmission, but they were given the option of trying it out. Subjects were also

asked how much they wanted to hurt their co-subject with the noise. Men with attitudes more condoning of aggression and with higher levels of sexual arousal to rape were more aggressive against the woman and wanted to hurt her to a greater extent.

Malamuth and Check (1982) successfully replicated these results in a similar experiment that didn't consider the subjects' arousal to rape but did assess attitudes. Later, Malamuth (1984b) examined the extent to which several measures related to violence against women (including attitudes) predicted laboratory aggression against both female and male targets. While strong relations between the predictor measures and aggressive behavior were found for female targets, only weak relations were obtained for male targets. Taken together, these three experiments consistently showed that attitudes condoning aggression against women related to objectively observable behavior -- laboratory aggression against women.

Although such laboratory assessments of aggression have the advantage of being an objective measurement not relying on subjects' self-reports, they have the disadvantage of using a setting that some researchers argue is artificial and lacking in ecological validity (e.g., Kaplan, 1983). The case for linking attitudes condoning aggression with actual aggressive behavior is strengthened by studies that have measured naturally-occurring behavior.

AGGRESSION IN NATURALISTIC SETTINGS: These studies have used samples of men from the general population as well as convicted rapists. The importance of attitudes toward violence is confirmed by data showing that men's aggression against women is linked with their own attitudes as well as those of their peers.

Ageton (1983) gauged the extent to which a variety of measures predicted levels of sexual aggression. Eleven to 17-year-old subjects, drawn from a representative national sample, were interviewed in five consecutive years between 1976 and 1981. Based on subjects' self-reported behavior, they were categorized as sexually aggressive or non-aggressive.

The results showed that involvement with delinquent peers at a young age was the strongest factor in predicting sexual aggression later in life. Personal attitudes toward sexual assault was another of the factors found to differentiate significantly between those who became sexually aggressive and those who did not. Ageton therefore concluded that "peer-group support for sexually aggressive behavior does appear to be relevant to the performance of this behavior, as do attitudes supportive of rape myths."

Another study was recently reported by Alder (1985). She used a subsample from a larger representative sample of men from a particular county in Oregon. Variables potentially predictive of sexual aggression were assessed. These included family, social class, educational attainment, war experience,

peer behavior, and personal attitudes toward sexual aggression. The findings suggested that the most important factor relating to sexual aggression was having sexually aggressive friends. The other two factors found likely to contribute to sexual aggression were attitudes legitimizing such aggression and military service in the Vietnam war.

Several studies using samples of college men also reported significant links between attitudes and actual sexual aggressiveness (Briere et al., 1984; Koss, Leonard, Beezley, & Oros, 1985; Mosher & Anderson, 1986; Rappaport & Burkhart, 1984). These studies measured self-reported sexual aggression on a continuum of behaviors ranging from psychological pressure on women to rape. Similar results were reported by Kanin (1985) who compared the attitudes of 71 university students who admitted committing rape with a control group of non-aggressive college males. He found that a much higher percentage of rapists justified rape in general than did control subjects. Moreover, he found that rapists were far more likely to believe their reputations would be enhanced among their peers by aggressive behavior toward women, particularly those perceived as "pick-ups," "loose," "teasers," or "economic exploiters."

In a study of 155 men who were mostly college students, Malamuth (1986) broke down the variables thought to set the stage for sexual aggression into three classes. Motivation for sexual aggression included sexual arousal to aggression, hostility toward women, and dominance as a motive for sex.

Disinhibition to commit sexual aggression included attitudes condoning aggression and antisocial personality characteristics. Opportunity to aggress sexually was assessed by sexual experience. These rape "predictors" were then correlated with self-reports of sexual aggression. While the "predictors" related individually to sexual aggression, interactive combinations of these variables allowed far more accurate prediction of varying levels of sexual aggression. Subjects who had relatively high scores on all of the predictor variables were also highly aggressive sexually. These data have been successfully replicated by Malamuth and Check (1985b) in an independent sample of 297 males. The findings suggest that a person's attitudes accepting of violence against women may be one of several important contributors to sexually aggressive acts, but that none alone is sufficient for serious sexual aggression.

Taken together, the data on unincarcerated subjects point clearly to a relationship between sexual aggression and attitudes supportive of violence against women, although they also highlight the importance of other contributing factors. One of these other factors, peer support, might also be influenced by the impact of media exposure on the audience's attitudes. The findings on unincarcerated men are reinforced by research on incarcerated rapists.

CONVICTED RAPISTS: Many clinical studies report that convicted rapists frequently hold callous attitudes about rape

and believe in rape myths to a relatively high degree (e.g., Gager and Schurr, 1976). Data from more systematic studies of rapists' attitudes tend to collaborate the clinical reports. For example, Wolfe and Baker (1980) studied the beliefs and attitudes of 86 convicted rapists and reported that virtually all believed that their actions did not constitute rape or were justified by the circumstances. Unfortunately, these investigators did not distinguish between general endorsement of rape myths and rationalizations of the rapists' personal crimes. Burt (1983) found that although rapists perceived the same degree of violence as the general public in vignettes describing aggression against women, they were less likely to perceive the violence as "bad" and more likely to justify it. Finally, Scully and Marolla (1984, 1985) found that rapists tended to believe in rape myths, particularly those justifying violence against women, more than control groups composed of other felons.

Other Relevant Data

NONSEXUAL MEDIA VIOLENCE: Although research on nonsexual media violence has not devoted much attention to the formation and importance of attitudes (Rule & Ferguson, *in press*), some relevant findings exist. The research of Huesmann, Eron, Klein, Brice and Fischer (1983) attempts the most direct assessment of cause and effect relations in this area. After involving elementary school children in a program designed to change their attitudes about television violence, the

researchers studied whether changed attitudes translated into less aggressive behavior. The students were randomly divided into experimental and control groups. Over a 2 year span, the experimental group was educated about harmful aspects of television violence while the control group received neutral treatments. Although the frequency of the children's free-time viewing of violence did not change, their attitudes about the violence did. In addition, their peers reported reduced aggression in the experimental group but no change in the behavior of the control group. These data suggest that changed attitudes about TV violence led to a reduction in personal aggression by children, as reported by their peers.

Another relevant study was just published by Vern der Voort (1986). He assessed whether individual differences in children's perceptual, emotional and attitudinal reactions to TV violence predicted peer-reported aggression. Significant relations were found between the predictors (measured one year earlier) and actual aggression. The more children approved of the violence of "good guys" on TV, the higher their aggression, even after factors such as socio-economic levels and school achievement were controlled. Vern der Voort also found that parents who were less concerned about their children viewing violence had more aggressive children. While these findings suggest a relation between attitudes and behavior, they don't enable cause and effect conclusions.

JURY STUDIES: One aspect of the model presented in Figure 1 is the idea that changes in attitudes may be of importance even if these attitudes do not increase the likelihood that the person himself will commit aggressive acts. Jury decisions, for example, involve attitudes about aggression and not aggressive behavior.

Feild and Bienen (1980) examined the impact of personal juror characteristics on reactions to a simulated rape case. The "jurors" in the simulated trials were groups of citizens, police officers, rape counselors and rapists. Juror attitudes about rape were found to be highly predictive of their decisions in the rape trial. For example, people who believed that rape victims often precipitate rape were more lenient toward the rapist than those not holding such an attitude. If attitudes condoning of violence against women can result in milder punishment of rapists, the deterrence against rape may be reduced by social attitudes.

Summary and Conclusions

The research presented has provided support for the model hypothesizing indirect causal influences of media sexual violence on antisocial behavior against women. Data were described which indicate: a) linkages between exposure to media portrayals of sexual violence and resultant attitudes supportive of sexual aggression, and b) a relationship between such attitudes and a variety of antisocial behaviors against

women. The data suggest that such attitudes may lead to high levels of sexual aggression if combined with other factors such as peer support for aggression, sexual arousal to aggression, antisocial personality characteristics and hostility toward women. Clearly, much additional research is needed to further develop and test this model.

As with many behaviors, it is apparent that antisocial behavior against women is a function of several interacting causal factors. It is very difficult to gauge the relative influence of media exposure alone, but it would appear that, by itself, it exerts a small influence. But this appears to be true to some degree for all the contributing causes. Only in interaction with other factors might they have substantial influences. The reduction of antisocial behavior against women, therefore, requires attention to all potentially contributing factors, including the mass media.

Footnotes

¹I thank Timna Horowitz and Susan Holley for valuable comments on earlier drafts of this paper and Rebecca Lipa for her excellent typing. Correspondence should be addressed to Neil M. Malamuth, Communication Studies, 232 Royce Hall, UCLA, Los Angeles, CA 90024.

²The term pornography is used in this paper to refer to sexually explicit media without any pejorative meaning intended. Also, the terms aggression and violence are used interchangeably herein, as are the terms sexually violent media and violent pornography.

³Of course, sexual explicitness in and of itself should not be ignored as a conveyance of messages. Based on cultural and personal background and experience, sexual explicitness may be interpreted in many different ways. For example, the uncovering of a woman's body may be perceived by some as debasing her. Similarly, the public display of sex may break taboos that could be interpreted as sanctioning other restricted behaviors (Malamuth, Jaffe, and Feshbach, 1977). However, such interpretations are not inherent to sexually explicit media whereas a positive depiction of rape or child molestation is not equally a matter of individual interpretation.

⁴The focus in this model is on the factors that may contribute to the development of antisocial behavior.

Obviously, there may be varied factors, including some media portrayals, leading to the development of attributes stimulating prosocial behavior and reducing antisocial responses. Also, this model does not necessarily exclude other possible effects of sexually violent media, some of which may not necessarily be judged harmful by many observers.

⁵ Some might argue that the use of college students in these and similar studies limits the ability to generalize from the findings. That implies that college students are more susceptible to media influences than non-college students or younger people. In fact, less educated and younger groups might be more susceptible to such influences.

⁶ It would be desirable to examine the effects of sexually violent media over longer time periods than a week. However, ethics committees have in certain instances refused to permit such delays, requiring that subjects be debriefed soon after the media exposures. These debriefings are intended to mitigate the negative effects of exposure to sexually violent media. They appear to have been effective (e.g., Donnerstein & Berkowitz, 1981; Linz, 1985; Malamuth & Check, 1984). They point to the need for further research on the efficacy of educational interventions, including those presented via the mass media, designed to reduce attitudes supportive of violence against women and to reduce susceptibility to the possible negative impact of sexually violent portrayals.

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FIGURE 1
HYPOTHEZIZED DEVELOPMENT OF AGGRESSION AGAINST WOMEN

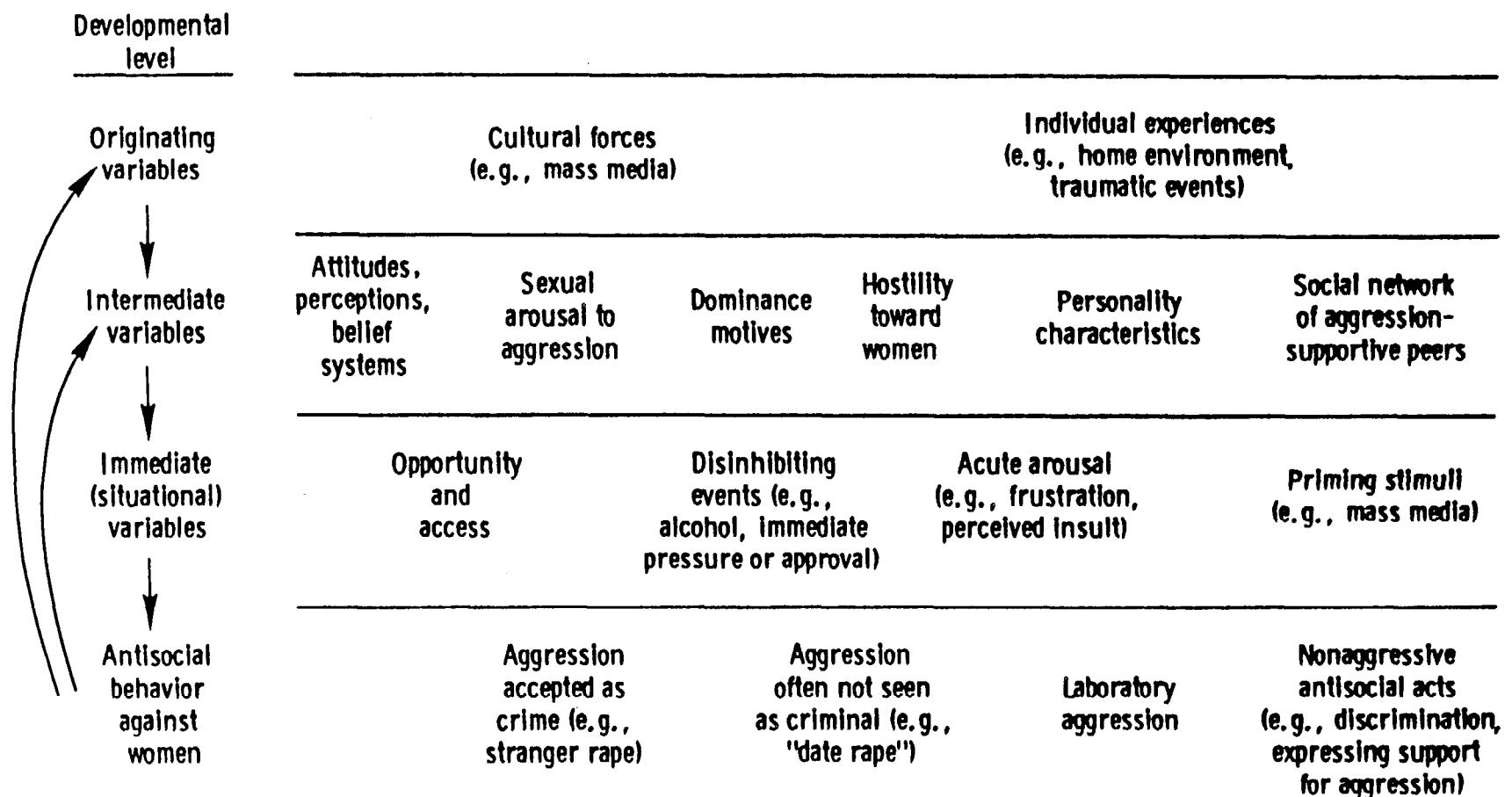
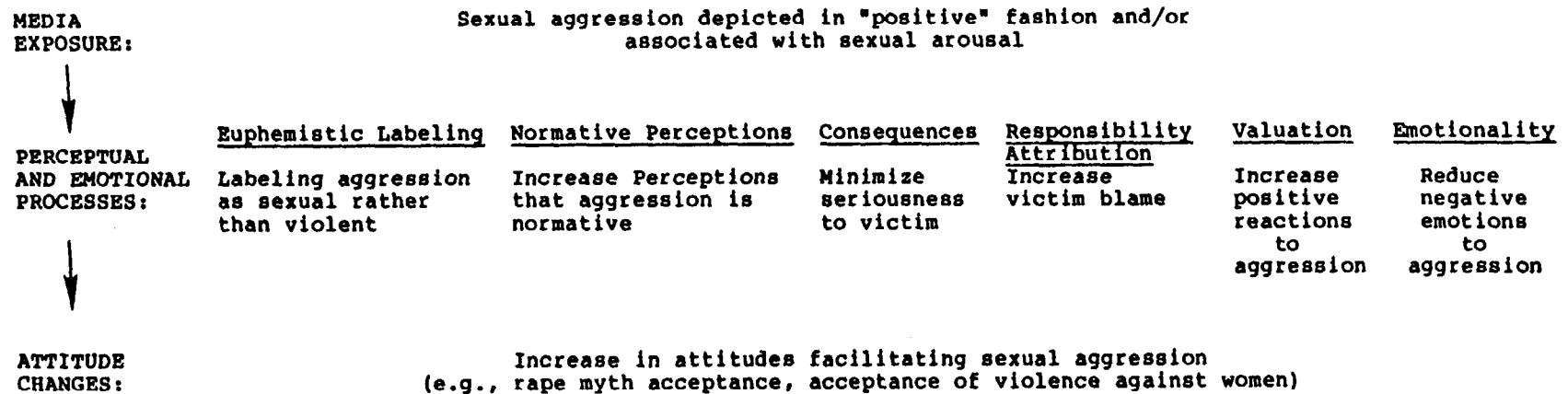


Figure 2

HYPOTHEZIZED PROCESSES MEDIATING IMPACT OF MEDIA SEXUAL VIOLENCE ON ATTITUDES



THE EFFECTS ON JUVENILES OF BEING USED
FOR PROSTITUTION AND POPNOGRAPHY

by Mimi Halper Silbert

This paper concerns the sexual exploitation of juveniles. For our purposes here, sexual exploitation refers to pornography and prostitution, although the paper also includes some discussion of incest and other sexual abuse of juveniles because they were factors in the backgrounds of many of the youths interviewed. Prostitution is defined as the exchange of sex for money; juvenile pornography refers to films, videos, magazines, books, or pictures that depict juvenile boys and girls in sexually explicit acts. This paper does not focus on the investigation of pornography, the collector, the distributor, or the viewer of pornography, nor on the pimps, customers, or law enforcement aspect of prostitution. Neither does it concern itself with the controversial issues of prosecution, legalization, or decriminalization. Rather, it focuses on the perspective of the youths and their experiences in being used by adults sexually for commercial and pornographic purposes. Specifically, the paper focuses on the impact of such sexual exploitation on the victim.

The paper is therefore based on self reports from young men and women, boys and girls who have been involved in juvenile prostitution and/or pornography. The findings discussed here are derived from two sources: (1) The results of a two and one half year exploratory study of "The Sexual Assault of Prostitutes", conducted for the National Center for the Prevention and Control of Rape, National Institute of Mental Health, sponsored through the Delancey Street Foundation in which the author was the principal investigator;¹ and

¹Three volumes describe the results of the study, Grant #R01 MH 32782-01, in detail. Silbert, Mimi, Sexual Assault of Prostitutes, Volume I: Phase One Final Report; Volume II: Phase Two Final Report; Volume III: Summary Report. National Center for the Prevention and Control of Rape, NIMH, 1982.

(2) clinical experiences with well over a thousand prostitutes and a hundred people who were used to make pornography as juveniles.

Delancey Street Foundation is a self-help residential center which successfully treats prostitutes, ex-convicts, and substance abusers through multi-dimensional services providing individual and group treatment, vocational training, education, and the development of independent living skills for 600 residents in four cities in the country, along with out-reach work for juvenile prostitutes and youths involved with pornography. The residents stay at Delancey Street an average of four years before graduating, completely rebuilding very shattered lives.² As President of Delancey Street, I have lived and worked in depth with our residents and the negative short and long term impact of sexual exploitation, as well as the secondary social problems attendant to sexual victimization, for fifteen years. The NIMH research findings corroborate the clinical pictures depicted by several thousand residents with whom I've worked: being used by adults for prostitution and/or pornography is harmful to the juveniles, not only during the distressing period of involvement, but also, and often even moreso, during their future development.

I. JUVENILE PROSTITUTION

In recent workshops with people in the helping professions specializing in juveniles, I have asked participants to list those clients whom they found the most difficult to treat. Juvenile prostitutes headed the list.

²For more detailed explanation of Delancey Street, see Mimi Silbert, "A Process of Mutual Restitution", chapter in book Mental Health and the Self-Help Revolution, Gartner & Reissman, eds., Human Science Press.

The comments reflected those made for prostitutes in general and were typified by the person who stated, "I hate to say once a prostitute, always a prostitute, but it seems that way. They say they want out, but nothing you do to help them out works. They run back. They rip you off. They just don't seem to want to change."³

From clinical experience, as well as from the study results, I believe the exasperation expressed by helpers working with juvenile prostitutes has a great deal to do with a self-destructive pull that develops among prostitute victims of sexual exploitation who have not dealt directly or successfully with overcoming their victimization. Indeed the opposite is true for these young women. Subjected to continuous abuse and victimization over which they have no control, and about which they have no understanding, these youths have developed what I term a sense of psychological paralysis which prohibits their ability to do anything positive about further victimization. They believe themselves unable to change destructive behavior; they become debilitated, self-deprecating, and entrapped in helplessness and hopelessness. Trapped in a self-destructive cycle, they feel themselves to be out of control of their lives. Essentially, they have developed a chronic disorder as a result of their victimization and an inability to separate themselves from the sexual exploitation in order to reestablish a positive life.

³ Mimi H. Silbert, "The Treatment of Prostitute Victims and Sexual Assault" in Victims of Sexual Aggression: Treatment of Children, Women and Men, Stuart and Greer, eds. Van Nostrand Reinhold Company, New York. This chapter explores in depth the problems of treatment of prostitutes and offers some solutions in detail.

The results of the NIMH study⁴ are based on an analysis of 200 women street prostitutes, the youngest of whom was 10, the oldest, 46. Seventy percent of those prostituting were under 21; almost sixty percent were 16 or under, and many were 10 or 11 years old. Seventy-eight percent of the sample reported starting prostitution as juveniles; and sixty-eight percent were 16 or younger when they started prostitution.

A majority of the juvenile prostitutes described family structures with the outward appearances of stability. For example, over three-fourths reported having a religious upbringing; that is, going to church regularly and/or attending a church school. Forty percent were raised by both mother and father. The younger the prostitute, the more affluent and more educated the family. Yet, despite the religious, financial, and other outward appearances of success, the study revealed a number of problems occurring within the family. More than half the prostitutes had parents involved in excessive drinking; in over half the families the subject saw the father hit her mother violently. Only nineteen percent of the subjects reported having any kind of positive relationship with their mother while growing up.

In addition to witnessing violence and feeling a sense of isolation in the family, 62 percent of the subjects were themselves beaten while growing up. Only in one third of the cases was the beating related to something she did. As distressing as these physical abuse situations are, the most damaging psychologically are probably those cases in which the victims couldn't ascertain

⁴A number of articles derived from the study have been published in professional journals. See for example, Silbert, Mimi, "Prostitution and Sexual Assault: Biosocial: Journal of Behavioral Ecology, Winter, 81-82. Silbert & Pines, "Juvenile Sexual Exploitation in the Background of Street Prostitutes", Social Work, 1982, Silbert et.al. "Substance Abuse and Prostitution", Journal of Psychoactive Drugs Vol. 14, No. 3. Silbert and Pines, "The Endless Cycle of Victimization", Victimology, Vol. 7.

why they were being beaten or those in which they were being beaten for no special reason. Two thirds of the victims who were physically abused by their families as children stated that the beating was not related to anything that they did.

Sixty-one percent of the women were sexually abused as juveniles by an average of two people each. Victims ranged in age from 3 to 16 with the mean age of victimization being 10 years old. Two-thirds of the victims were sexually assaulted by father figures: Thirty-three percent were abused by their natural father; thirty percent by a step or foster father; four percent by a mother's common law husband. Only ten percent were sexually molested by strangers.

The emotional impact reported by the victims from the abuse was extremely negative. Only one percent felt that they had resolved the experience positively. All other victims reported feeling terrible about the experience, and reported that the abuse negatively affected the way they felt about men, about sex, and about themselves. Almost half of the victims overtly blamed themselves for the abuse, despite the fact that in almost every case either physical or emotional force was used on them. The horror of the incidence of sexual abuse is compounded by the fact that in most cases (91%) there was nothing the victim felt she could do about it, either because she didn't know what could be done or because she was afraid of the repercussions. In about two-thirds of the cases, the victims had never told anyone about their sexual abuse until this study. Of those who disclosed, fifty-eight percent stated that disclosing the sexual abuse had a bad effect on their relationship with the person told. Only one percent told a professional; only three percent reported to the police.

Seventy percent of the women reported that the sexual abuse affected their decision to become a prostitute, "I was only 11 when it happened. I felt sick and disgusted...I wanted to die; I thought everyone could tell what he did to me by looking at me...I thought my mother would think I was crazy if I told her or maybe she wouldn't even have cared; she's like that. She doesn't want to lay her trip on me...He didn't even love me: he just wanted to try something new. Yeh, I wasn't nothing but a new hole to my own father... After I ran away, I tried to get a straight job, but who would hire a 12 year old drop-out who was nuts?...At first when they tried to talk me into prostituting I said no. Finally, I was scared and hungry and lonely. I figured I was already ruined. I couldn't ever go back home after what happened, so what did I have to lose?" Even those who did not score the sexual abuse as affecting their decision to become prostitutes, did reflect the influence the abuse had in their open-ended comments. "My father bought me so who cares who else does?"

The picture which emerges from the data on peer relationships is one of young girls of grammar school age, feeling extremely isolated, lonely, and rejected by a group of peers to which they wanted to belong, moving slowly out of isolation and finding friends among deviant groups, where they do not experience rejection. Isolation following sexual abuse was a common experience among all those in the study.

A distressingly high percentage of the subjects (44%) seriously attempted suicide. In addition, 27 percent reported trying to harm themselves in some other way, or tried to commit suicide more because they wanted someone to know they were hurt than because they seriously wanted to die.

The average age of juveniles starting prostitution was 13. Almost all the juveniles (96%) were runaways prior to starting prostitution. Almost all the subjects (94%) felt very negatively about themselves just prior to starting prostitution. The vast majority felt they had no other options at the time they started prostituting. Basic financial survival was the reason mentioned by over ninety percent of the juveniles for prostituting.

Although there were different types of the prostitution life-style described, one predominant pattern emerged among the juvenile prostitutes. While a number of juveniles were recruited for prostitution by pimps and other prostitutes, many reported that they were recruited by middle-aged women, nurturing in style and appearance. These women would meet them at areas in which they were extremely vulnerable such as bus depots and cafeterias in the Halls of Justice after they had been picked up by the police and released. The women, whom I have labelled "house-mothers", would take the young girls to a cafeteria, buy them a meal, listen to their stories, and offer them a great deal of concern and sympathy. They slowly encouraged the girls into prostitution, not so much by promises of excitement and glamour, but through a continuous process of nurturing, concern, and an offer to care for all their needs. A number of the juvenile prostitutes were working out of "group homes" as "sex rings"⁵ in which three to five young girls lived, their meals were provided for, and support and control were supplied by the house-mother. Pimps serviced the entire group, not so much as a lover, but more so as the business agent and ultimate

⁵ Although these "group homes" were not labelled as sex rings, they share many of the factors described in the *Typology of Sex Rings* in Ann Wolbert Burgess, Editor, Child Pornography and Sex Rings, Lexington Books, Massachusetts, 1984.

protector of the group. Over three-quarters of the juveniles stated that they had a pimp at the time of the study, despite the fact that forty-one percent stated that there were no advantages they could name in having the pimp.

Although the pimp's primary function is seen as protecting the prostitute, two-thirds of the youths have been physically abused or beaten by their pimps many times. Indeed, victimization as part of their work is very high. Seventy percent were victimized by customer rape or clients similarly going beyond the work contract. The passivity and helplessness experienced by the victims became evident in the fact that in more than three quarters of the cases of physical abuse by the customers, the women felt there was absolutely nothing they could do about the abuse. Similarly, in over half the cases of those who were beaten by the pimps, they accepted it as a way of life, felt they deserved it, or understood it as a sign of caring. One young 14 year old girl explained, *"It made him feel like more of a man, and I felt it was my duty...I'm used to it by now. They can't hurt me no more."*

Aside from the sexual assault related to their work, well over half of the prostitutes reported that they had been raped since becoming prostitutes, but completely unrelated to their jobs. In the majority of cases, the rapist was a stranger to the victim, the rape involved physical force, and in many cases the victims sustained physical injury. Every single rape victim reported fear, guilt, rage, shock, hurt, depression, relief to be alive, overwhelming helplessness at the time of the rape, and feeling out of control of her own life.

Emotional trauma experienced by sexual assault victims in general appears to be compounded for these victims by two factors: 1) The informal street code of prostitutes precludes the display of hurt or emotional upset or leaning on personal or social support for assistance in resisting such emotional trauma. Most prostitutes felt they could not break that code and therefore dealt with their feelings alone and/or attempted to suppress them. 2) The helplessness generally experienced as a result of rape is exacerbated by a general feeling of powerlessness over their lives. With no options or control over other areas of their lives, they place a disproportionate amount of energy on the ability to control their sexual activities. The negative impact of rape is thus intensified by the fact that it takes this important sense of control from them.

Therefore, despite the violence, and the serious negative physical and emotional impact of the rapes, significantly more than half of those victims never told anyone about the rape until this study. Of those who did seek help, the majority stated that they felt that the treatment that they received was indifferent or not helpful, and that being a prostitute negatively affected the way they were treated.

When asked the advantages of being a prostitute, they mentioned an average of one advantage, with almost everyone citing money for survival as the primary advantage. When asked what the disadvantages are, the respondents cited an average of a little over six disadvantages. For example, "It is degrading...you develop a total hatred for yourself for being so low, filthy, and dirty. You're like a slave, but like most slaves you don't know how to get out. The horror of opening your eyes and finding someone on top

of you...it's hard to forget the faces and the smells. Especially the smells...The only thing to do is not feel anything and pretend you don't care. By now I don't think I'm even pretending. I don't think I care about anything. (13 years old) Yet, a sense of entrapment in a hopeless situation emerged when the subjects discussed their options and plans for leaving prostitution at the time of the interview. Although most saw themselves as remaining in prostitution only for a limited period of time, they were unable to set a specific time. They saw no other options, particularly because they were runaways, uneducated, unskilled, and saw adequate employment as the major enabler to leave prostitution. Even when asked to state their hopes, rather than expectations, the juvenile prostitutes, feeling trapped in a degrading life, were simply afraid to hope. As one of them said, *"I've learned not to expect nothing. I just hope I don't end up nuts."* (16 years old)

The patterns reported by the women street prostitutes in the study reflect a picture of both male and female prostitution treated at Delancey Street both through its residential program and through the outreach services offered. Prostitution among boys differs from female prostitution in the portrait of their life on the street. For example, while the females are generally involved with a pimp, the males generally operate independently. While female prostitution has tended to include a higher proportion of minorities in the past, in recent years in the San Francisco Bay Area, the numbers of white girls are increasing and appear to be a majority. Similarly in a reverse way, male hustlers have been predominantly white; recently, more minorities are entering hustling, particularly as more and more street

youths, those in crisis, and those preteens who are experimenting with drugs are also experimenting with hustling.

Because they work without pimps, the male youths tend to be more peer involved, are less professionally organized than the young women, and engage in a more sexually abusive lifestyle although a less physically battered one than the women.

The males described significant amounts of violence and sado-masochistic sex. While there seems to be a great deal of physical violence done to the female prostitute, the males talked more about their being violent in return. Again, this generally focused on sexual violence.

The males, more so than the females, seem to maintain a constant search for the "sugar daddy" or trick who would become a long-term relationship. While a number of the females are looking for a love relationship to pull them out of prostitution, a large number of the males are looking for a lonely man with a lot of money. *"You can play one of those suckers for a pretty long time. They need you. Especially when they're old and they feel pretty desperate, they like us. They like me 'cause I'm real young. They act like it's all this love shit, and you just let them do it as long as they pay. They pay real good. And you can keep it up for a pretty long time. I got a friend who has been playing this one out with a guy for a long time. He's set and that's what I want to be."* (14 years old)

Those male prostitutes who are also part of the gay sub-culture noted that for them, in addition to making money, prostitution offered a sexual outlet. In the last few years, a high percentage of those who are gay and prostituting

primarily to a gay market, have tested positive to exposure to the AIDS virus, and several I have worked with have in fact come down with the disease. Recently the subject of AIDS has increased the numbers of young male gay prostitutes seeking to leave the prostitution life style and is a pervasive fear with which many are dealing.

On the other hand, while their lifestyles as prostitutes may be different, the backgrounds of the males tend to be quite similar to those of the females. Young male prostitutes report similarly troubled family histories. They describe a great deal of parental fighting, drinking, and emotional abuse or neglect. Their relationships with their families are poor, and they describe themselves, as did the women, as isolated among their peers. Although they come from families which appear less stable on the outside than the women did, they show similar and even greater victimization, both physical and sexual. Over three quarters of the males involved in hustling reported that they were victims of juvenile sexual abuse. Half of these were involved in incest. Again, disclosure was almost non-existent. The incest was reported by the child in only one case, and in that situation the disclosure proved to have a negative impact on the relationship with the person told.

II. PORNOGRAPHIC INVOLVEMENT

The NIMH study did not attempt to research either the effects of violent pornography on sexual assailants or the use of juveniles in child pornography. Yet, as happens in every large research project, especially exploratory research, some unexpected information emerged, important information, that unfortunately was not studied in a systematic manner, but which was significant enough to report. Such was the case in this study with regard to the relationship

between sexual abuse and pornography.⁶ From the detailed descriptions the subjects provided to open-ended questions in regard to incidents of juvenile sexual assault in their childhood and to incidents of rape following entrance into prostitution, it became clear that there was a relationship between violent pornography and sexual abuse in the experience of women street prostitutes. Since the relationship between sexual abuse and pornography was unexpected, no questions addressed it directly. Only after the data collection was completed, was the content from all the cases of rape in juvenile sexual abuse analysed for any mentioned relationship between these incidents and pornography.

Out of 193 cases of rape, 24% made unsolicited comments that the rapist alluded to pornographic material. The comments followed the same pattern: the assailant referred to pornographic materials he had seen or read and then insisted that the victims not only enjoyed the rape but also the extreme violence. For example, the following is a typical victim's comments transcribed from the interview describing how the assailant made reference to his prior use of pornography, *"I know all about you bitches, you're no different; you're like all of them. I seen it in all the movies. You love being beaten."* (He then began punching the victim violently.) *"I just seen it again in that flick. He beat the shit out of her while he raped her and she told him she loved it; you know you love it; tell me you love it."* The assailant continued to beat and slap the woman while raping her, repeating his demand that she say that she loved it, just like the woman he saw in the movies. In the majority of cases, there were no distinctive features about the victims, their situations, or the factors of the rape, which could account for the assailants' mentioning

⁶The results reported, along with a review of the literature and discussion, in Silbert and Pines, "Pornography and Sexual Abuse of Women", Sex Roles Vol. 10, Nos. 11/12, 1984.

their involvement with pornography. In 12% of the 193 cases of rape, the assailant mentioned his involvement with pornography as a response to the victim's telling the assailant she was a prostitute.

In 19% of the rape cases, the victims tried to stop the violence of the rape by telling the assailant that they were prostitutes. For example, "*Calm down. I'm a hooker. Relax, and I'll turn you a free trick without all this fighting.*" Rather than assuage the violence, this assertion only exacerbated the problem; the assailants increased the amount of violence in every single case. They became furious at hearing the woman say she was a prostitute. Most started screaming, demanding that she take back what she had said, insisting on taking her by force. In order to reassert their own control, assailants then became extremely violent. In all these cases, the victim sustained even more serious injuries than those victims who did not disclose their prostitution status. This finding supports the contention that rape is an aggressive act motivated by a desire to establish the rapist's power over his victim, rather than a sexual act.

In 12% of the 193 cases, the victims who told the rapist that they were prostitutes not only received more violent abuse than those who didn't tell, but also elicited overt comments from the assailants related to pornography. An analysis reveals that there is a pattern of response among the assailants to the disclosure, characterized by the following four elements: (1) their language became more abusive, (2) they became significantly more violent, beating and punching the women excessively, often using weapons they had shown the women, (3) they mentioned having seen prostitutes in pornographic films, the majority of them mentioning specific pornographic literature, and (4) after completing the forced vaginal penetration, they continued to assault the women sexually in

ways they claimed they had seen prostitutes enjoy in the pornographic literature cited. For example, "After I told him I'd turn him a free trick if only he'd calm down and stop hurting me, then he just really blew his mind. He started calling me all kinds of names, and then started screaming and shrieking like nothing I'd ever heard. He sounded like a wailing animal. Instead of just slapping me to keep me quiet, he really went crazy and began punching me all over. Then he told me he had seen whores just like me in (three pornographic films mentioned by name), and told me he knew how to do it to whores like me. He knew what whores like me wanted...After he finished raping me, he started beating me with his gun all over. Then he said, 'You were in that movie. You were in that movie. You know you wanted to die after you were raped. That's what you want; you want me to kill you after this rape just like (specific pornography film) did.'" This particular women suffered, in addition to forced vaginal penetration, forced anal penetration with a gun, excessive bodily injuries, including several broken bones; and a period of time in which the rapist held a loaded pistol at her vagina, threatening to shoot, insisting this was the way she had died in the film he had seen. He did not, in fact, shoot after all.

Similarly, 22% of the 178 cases of juvenile sexual abuse mentioned in unsolicited comments, the use of pornographic materials by the adult prior to the sexual act. The particular manner in which the adult used the pornographic materials varied. For a few, they used the materials to try to persuade the children with comments such as, "Now doesn't that look like something that you and I would have a good time doing together? Come on look at that. Doesn't that make you want to come with me?" Others used pornographic materials to attempt to legitimize their actions. Several victims report that the abuser showed them pictures depicting children involved in sexual acts with adults to convince them the

it was acceptable behavior and that it was something they wanted to do.

These abusers for example, "See the expression on her face; that's exactly how you look at me." Others used the pornographic materials to arouse themselves prior to abusing the child. For example, one of the subjects in the study described a primitive movie projector her father had set up in the garage. He used to show himself and his friends pornographic movies to get them sexually aroused before they would rape her. (She was 9 at the time.)

Thirty-eight percent of the 200 women prostitutes interviewed reported that sexually explicit photographs had been taken of them when they were children for commercial purposes, and/or the personal gratification of the photographer. Twenty percent were under the age of 13 when this occurred; the rest of the subjects were under the age of 16 years old. It should be noted that while many of the descriptions were open-ended comments included in their stories, some were responses given to questions of how they earned a living once they ran away from home and before they began prostituting.

It is likely, given the numbers who spontaneously described their involvement with pornography, that the cases of pornographic abuse of children would be significantly higher among the prostitute population if studied overtly.⁷

⁷Indeed, there is already some evidence indirectly supporting this contention. For example, Baker (1978) mentioned that several authorities have found a close relationship between child pornography and the practice of child prostitution. Rush (1980) mentioned that most runaways can survive only as prostitutes or by posing for pornography.
Baker, C.D. "Preying on Playgrounds: The Exploitation of Children in Pornography and Prostitution", Pepperdine Law Review, Vol. 5, No. 3, 1978.
Rush, F. "Child Pornography" in Take Back the Night, Lederer, Ed., William Morrow Co., N.Y., 1980.

III. IMPACT OF PORNOGRAPHY ON JUVENILE VICTIMS

The following discussion is based on self reports and clinical observation of one hundred (100) males and females who, as juveniles, have been used to make pornography, including hard-core and simulated sexual films, videos, magazines, and photographs. The subjects ranged in age from 6 years to 21; the median age was 14.

Clinical data indicate that being a subject in pornography is disturbing and damaging to the juveniles used. Short and long-term negative effects were apparent in terms of physical, behavioral, attitudinal, and emotional impact on the subjects. The effects of being used to make pornography will be explored in this section during three periods of the victims' involvement: 1) At the time of the exploitation; 2) At the time of disclosure for those who told; 3) Years later, as these people were trying to rebuild their lives. Some few of the juveniles counseled were still involved with pornography.

1) At the Time of the Exploitation

During the exploitation itself, several patterns emerged. Those who were involved with the pornography on a short term basis and had stopped their involvement by the time of the interview, recalled primarily physical and somatic impacts. For example they talked about a great deal of soreness and irritation in genital, vaginal and anal areas. They remembered feeling generally flu-like during the period. They described symptoms such as vomiting, a lot of headaches, a loss of appetite and sleeplessness. Emotionally, most described themselves as extremely moody and unable to continue on with the friendships they had had before because they felt they

were now so different. Those used by adults to make pornography over a longer time described more intense emotional isolation as time passed. They also talked of growing feelings of anxiety, and many experienced direct fear. Clinical observations of those still involved with pornography at the time of the counseling underscored these descriptions. Although the physical symptoms were similar, the emotional withdrawals, isolation, moodiness, daydreaming, and complete sense of hopelessness were far greater when observed clinically than when described by those recalling their own past involvement. That is, a typical emotional description included such comments as "*I remember not paying a lot of attention to teachers and people like that sometimes*". Clinical observation of youths of similar age and similar type of pornographic involvement showed them extremely noncommunicative, very withdrawn, seriously inattentive, and, highly fearful and/or anxious.

2. At the Time of Disclosure

One of the most destructive impacts on juveniles of their participation in pornography is the silent conspiracy into which they feel bound by the offenders. Whether they were paid or not, the participants in the juvenile pornography all expressed an overwhelming pressure to cooperate with the adult, never to tell, that disclosure would not only discredit the offender, but would totally shame and discredit the juvenile, and leave him or her completely isolated. Since many of the victims were already vulnerable because of their need to be included, feel wanted, and cared for, even for those who participated simply for survival money, the pressure of the silent conspiracy had a long term highly negative affect on them, particularly on

their ability to trust others or to feel trustworthy themselves. This conspiracy, coupled in some cases with family backgrounds which left the victims isolated from an adult they could trust with their "secret", accounted for most of the victims' not telling anyone about the exploitation.

Although the majority of the victims never told anyone of their involvement with pornography, disclosure occurred in four cases through law enforcement intervention, and in one case where a young woman told her mother of her involvement in an attempt to have her mother intervene. In two of the cases, although the period immediately following the disclosure was extremely traumatic and stressful, the situation was ultimately resolved in a generally healthy manner. There was a successful prosecution of the offender, and the victims, who were 6 and 8 years old at the time, were provided with treatment. In the other three cases, the period following the disclosure included social pressure on the victims and their having to deal with the negative reactions of others. In one case there was a great deal of fear of retaliation, particularly because the offender was violent and was ultimately not sentenced for the offense. In the fifth case, where disclosure was initiated not by law enforcement but by the victim herself, the mother blamed the girl.

The girl, Audie, was 12 years old when she disclosed her involvement in pornography. Audie had been a victim of incest from ages 9 to 11, and had begun to show severe signs of withdrawal and depression around age 11. The family placed her in a psychiatric ward for observation. One of the psychiatric

technicians in the hospital began taking pictures of the girl, telling her that she could make enough money from the pictures to not have to return home. Initially Audie was terrified of going back to the home not only because she feared further abuse by her father, but also because she feared her mother, the dominant one in the home, would discover what had occurred. She allowed the technician to take the pictures thinking "it didn't matter anyway since I'd already been ruined", and was anxious to go out on her own. However, after he took well over 100 pictures and did not provide her with any money, she began to feel trapped. He then began posing her being tied up using sexual devices, and with the suggestions of violence and beatings, she really became panicked. In a momentary awareness that she was getting herself more deeply involved rather than using the pictures as a way to break free from sexual exploitation, she turned to her mother for help. At first, particularly because she was in a psychiatric ward, her mother insisted that she was delusional. Her mother was extremely angry with her, blamed her, called her "oversexed", and yelled at her for having continual sexual fantasies. The mother reported her upset to the psychiatrist in charge of the case who met with Audie. Because she felt completely boxed in a corner at this point, Audie was able to overcome her fear of retribution by the technician and told the psychiatrist of the incident. As it turned out, the psychiatrist was able to discover the truth of the case, and found that the technician had taken pictures not only of this young girl, but also of a number of

other youngsters in the ward, many involving bizarre, violent, sadomasochistic sexual situations. When the mother was told that the situation was in fact a true one, she was outraged at the hospital, then continued her feelings of shame and disappointment in her daughter and the belief that the daughter was "oversexed". Her mother's response increased her secrecy, withdrawal, and self-blame. Although she was released from the hospital, Audie ran away from home and spent eight years on the street. She entered Delancey Street when she was twenty. She was completely desperate, hopeless, homeless, very angry, and very guilty. Indeed, she had attempted suicide twice, was a heroin addict, felt completely out of control both of her life and of her current compulsive thoughts and behavior, had an extremely low self-concept, and was violent. Although she used sex for money, for attention, and as a way to get what she wanted, she had no emotional involvement with any of her sex partners and, aside from tremendous rages and swings to incredible guilt and self blaming, she had little or no affect.

3. Years Later

The long term impact of participating in pornography appears to be even more debilitating than the immediate effects. The initial negative responses of shame, fear, or anxiety develop into extremely negative self-concepts,

sustained shame and anxiety, deep despair, inability to feel, hopelessness, and psychological paralysis.

For example, Mike had participated in making hard-core pornography films for profit beginning at the age of 16. Mike had been in and out of juvenile halls since he was 12, for being incorrigible at home and for other minor juvenile offenses, and he was using drugs by age 15. He had had one girlfriend from age 14 to 16. At 16, while he was in juvenile hall, the girl left him for their drug dealer and began turning tricks on the street. In response, when released from the hall, Mike headed to a commercial pornographer known to the gang he ran with on the streets. He made films for the company for a one year period. During that time his drug problem increased greatly, and he felt the money he was making from the pornography was not enough to sustain his drug habit. He left pornography and became involved in a series of burglaries and armed robberies which had him in and out of prison for ten years. Mike came to Delancey Street at 27, functionally illiterate, unskilled, alone, and wanting to die.

In working through his past to build a new life during his stay at Delancey Street, Mike found his involvement in pornography to be the hardest part of his life to admit. He concealed it for a long time, and when he finally disclosed it, although he experienced an initial relief from its being out in the open, he began having repeated nightmares, and became extremely paranoid, despite the fact that he had had no real problems with paranoia since coming to Delancey Street. He was unable to get into a relationship

for several years, and was obsessed with the fact that everyone scorned him and wanted nothing to do with him because of his "*debasing myself, making myself so low, doing disgusting sex thing after sex thing. I didn't care what or who I put it in. I have no right to touch any decent girl. I mean like I feel bad about what I did to my family and everything*" and I ripped off an awful lot of people and I know I was a real scumbag for a lot of years. But at least with that I feel like now that I'm helping people and doing good things, a lot of the rest of me can be a person who can hold his head up again one day. But somehow the stuff that I did for (name of pornographer) and that I let them film and that I know people saw, I just don't think I can touch any girl. I don't even mean sex. I mean I can't love anyone good. I'm like an animal. Why would she want to have anything to do with me?" It took over two years of intensely working with Mike to bring him to separate the acts from himself and the past from his future. When he finally entered his first relationship, he had a great deal of difficulty. However, he at least was able to feel some hope and investment in the future of his life. Now, five years after entering Delancey Street, Mike has earned a G.E.D., is a licensed electrician and a diesel truck driver, and has been in a healthy relationship for a year.

Like Mike, most of those who were used as juveniles to make pornography, particularly hard-core pornography,⁸ expressed deep humiliation, extremely

'The impact on participants in juvenile pornography may differ in accordance with various categories of pornography. Those involved in hard-core pornography in which sex acts, bizarre or violent varieties of sexual intercourse are photographed or filmed, seem to have the most intensive and extensive damage. Those who were used to pose for nudist materials with sexual simulations and implications appear to have somewhat less extensive damage. Because no real study was conducted to differentiate the extent of the negative emotional and attitudinal impact of the pornography on the juvenile victims, these are merely suppositions.

long term and very negative impacts on their attitudes toward themselves, towards sex, towards their intimate relationships with others. An overwhelming sense of unworthiness and dirtiness pervaded virtually all of their pictures of themselves.

Julia came to Delancey Street for help at age 21; she had prostituted in massage parlors for 3 years; she had been used to make pornographic films commercially, but primarily underground pictures and videos for 4 years prior to that.

Julia grew up in a middle-class area in a small city in the Southwest where she attended parochial school until she was 14 years old, when she dropped out of school. Shortly thereafter she ran away from home. Up to that time she had lived at home with her step-father, mother, and three step-brothers. Her step-father drank excessively while she was growing up; her mother worked and was not at home a lot. There was some violence in the home, in which her step-father hit her mother while drunk on numerous occasions and also beat her randomly throughout the years she lived at home.

Julia was sexually abused by one of her step-brothers from the time she was 12 until she left home. *"He and my step-father and one of the other brothers used to watch these pornographic movies out at my Dad's workshop. They were always laughing and making loud noises when they watched it and I wanted to be included. I was in a weird position in the house anyway. I'd call my father my step-father because he isn't really my father. But*

he was the father of the boys and two of them were older than me.

Even the younger one was his. I don't know what happened with me. I don't know if I was a bastard or what. I only know he wasn't my father and I used to have to call him step-father and no one would tell me who my real dad was. Anyway, I wanted to see what the movies were that they'd always be watching. So one day my oldest brother took me in and showed me. To tell the truth I could hardly make out what was going on, but as he was watching he became more excited. He started showing the movie a second time and started masturbating and making all kinds of disgusting comments. I wanted to get out of there by then but the workshop door was locked and no one came home in the afternoons until dinnertime. At the end of the second time, he pushed me down and tied my hands with his belt and raped me...He told me that if I told my mom I would be kicked out of the family because I was only there because he and his father and brother agreed that I could stay. I was sobbing and begging him but he told me that we'd do this whenever he wanted and that I better not tell anyone...I didn't tell and that's just what happened. I did what he said and never asked any questions and I never told anyone and I kept feeling sicker and sicker.

One day I was making trouble at school and the nun started screaming at me and saying 'everyone knows what's wrong with you girl'. I knew I hadn't told but I thought everyone must know. I ran home that day and decided I didn't care what anyone did to me. They could kill me but I was never going back to that school...Anyway, with things getting worse at home and having no real friends anymore, I decided to run away to (the nearest big city)...

I was having a hard time surviving, so when he offered to pay me and feed me and buy me some clothes just for letting him take pictures of me, I really thought I had a good deal. After a few months I really thought everything was going to be great. I was sleeping with him, and I didn't care that the cameras rolled and took pictures of us while we made love, because he was the first guy who really seemed to want me. After a while he told me that I was the best he'd ever seen, and he thought I could probably take two or three guys on whereas most girls couldn't do that...I really didn't want to, but it seemed real important to him and I wanted him to be proud of me. He was 33 years old and I knew he had lots of women and I thought if I was the only one who could do this, then I must be really something special to him... They began to film with with several guys...Then came all the disgusting things; they would just put anything up me, stalks of celery...then it started with the Coke bottles. It became a big deal, how I could get bigger bottles up me than anyone that had worked for them... By this time I had been with (name) for about three years. He was still supporting me, but he was now beating me a lot, and was spending most of his time with other girls. I was getting completely broken and desperate. I started using drugs about two years into being with him, and now he is no longer asking me to do anything to make him proud. Now he would just withhold my drugs and tell me if I wanted them I'd have to do these things. I needed that dope just to get through the day. I was strung out pretty bad and I didn't care what they put up me and I didn't care how many of them took pictures of it. I really didn't care about nothing... The thing I guess that finally got me out of there is when he brought

another woman he'd been with and told me I had to do it with her for the pictures...I don't know why that was worse than bottles or celery or maybe it was just all of it combined but anyway, I had just had it. So I took off...I was just about 18.

I survived for a couple months although he kept coming after me. The people at the place I was staying at told me not to worry, that they'd protect me. I guess it wasn't so much that I was afraid but more that I thought that he really must want me badly because he kept coming after me. I thought maybe he found out I really was special and would stop beating me up and stop playing around with all those other women. I don't know, anyway I went back with him. Then the same stuff started all over again.

Finally I took off for good. I ripped off one of the guys and had enough money to get myself to (another state). I decided I'd straighten out some. I was still shooting dope, but not as much as I had been. And I swore I'd never let anyone take no pictures of me again...I ended up working in a massage parlor...It wasn't as bad as what I'd been doing. A lot of them were old, you know, kind of disgusting, but at least I didn't have to do all that weird stuff...By then I was so sick of myself and being used by old men...I decided to come to Delancey Street to try to get my life back."

After three years of intensive counseling and work developing her strengths at Delancey Street, Julia still found herself choosing men who did not treat her well, and rejecting men who were good to her. Even after several years of a successful career in interior design, and success and confidence in all

areas of her life, Julia still felt she was "almost compulsively attracted to self-centered guys who used me, and bored by the nice guys." She is still working on feeling worthy of a mutually caring relationship.

These case studies typify many of the adolescents who have been used to make pornography. Over time their self-concepts are eroded. The problems which occurred during the time of the exploitation were made worse as the years passed, particularly because most were unable to disclose the exploitation or to resolve it in any healthy fashion. As a result, they feel horrible, not only about themselves, but about the people around them. They describe feeling desperate about their lives, out of control of both their thoughts and their behaviors, unable to make it in society, and unable to separate the acts they had been involved with from themselves.

It is important to understand how large a role secrecy played for most of these youths. The same feelings reported by victims of physical and sexual abuse were described by juveniles about their being used for pornography. They felt there was absolutely nothing they could do about the victimization. I suggest here that when excessive victimization is coupled with the lack of understanding of the causes of the abuse, as well as a sense of impotence to do anything to change the situation, then a sense of psychological paralysis develops.

Psychological paralysis is characterized by immobility, acceptance of victimization, feeling trapped and hopeless, and the inability to take

the opportunity to change. As I define it, psychological paralysis seems to occur as an outgrowth of extended and repeated situations which lead to "learned helplessness". A growing body of literature in social science has shown that when people (and animals) undergo a series of negative events over which they have no control, the result is learned helplessness.⁹ The research on learned helplessness is focused generally on animals and task performance of people. Some literature has explored the relationship between learned helplessness and clinical depression, with a focus on particular groups such as autistic children or battered wives. Learned helplessness has been found to be related to depression and ineffective ways of dealing with events, even positive ones. After people have developed learned helplessness they are less likely to believe that they have control over the success and failure of their experiences, assuming that they are going to fail at tasks that would otherwise have been within their ability.

It is my contention that a sense of psychological paralysis pervades those juveniles who have been used as juvenile prostitutes and to make pornography who claim that they hate what they are doing, who feel that they did not choose to do that, yet who seem to be completely unable to leave the lifestyle, sometimes even when other opportunities are offered. They maintain a belief that bad consequences would occur to them no matter what new steps they would take. They have lost any sense of control over their lives and have accepted feeling trapped and victimized.

⁹ Seligman, M. Helplessness "On Depression, Development and Death", Freeman Press, San Francisco, 1979.
Walker, L.E., "Battered Women and Learned Helplessness", Victimology, 2, 3-4, 1977-78.

Therefore, whatever other controversial issues surround the subject of pornography, it clearly behooves us to make available to juveniles used by adults to make pornography intervention services to help them gain control over their lives. While not all appear to be seriously traumatized at the time that they are involved, the long term effects seem to be extremely damaging for so many, particularly when compounded by other abuses and/or secondary problems.

TECHNIQUES DESIGNED TO MITIGATE THE IMPACT OF MASS MEDIA
SEXUAL VIOLENCE ON ADOLESCENTS AND ADULTS

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I. Introduction

The concern over the potential effects of media violence on both children and adults is not new. The research literature abounds with studies showing effects on behavior, attitudes, and perceptions. While there are disagreements regarding the relative contribution of mass media violence to actual aggressive behavior (e.g., Freedman, 1984), the research community is fairly unanimous in its conclusion that at least some individuals are affected and that exposure to many types of violent media can contribute in some part to the general incidence of violence in our society. The research findings linking exposure to mass media violence with anti-social behavior have been summarized in the 1982 NIMH report on media violence and will not be discussed here.

While the last two decades were devoted to research on the impact of mass media violence, the last few years have seen some emphasis on methods of countering or mitigating the impact of exposure to media violence. This research has noway reached the point where we can say with certainty that a given message, educational program, or label on a particular media product is effective in reducing the impact of exposure to violence. We are, however, able to identify some promising procedures developed independently by several researchers that may counter the effects of exposure to media violence. The intent of this paper is to very briefly review these findings and the findings from empirical investigations on the impact of exposure to sexual violence, and then to review in greater detail attempts at mitigating the effects of exposure to violent pornography and mass released (R-rated) sexually violent media presentations. Several of our suggestions for intervention programs for consumers of sexual violence are derived from the results of investigations of programs to counter the effects of exposure to milder forms of violence contained in network television portrayals among gradeschool children.

II. The Effects of Exposure to Sexual Violence in the Media

By the latter part of the 1970's many persons were becoming concerned about what appeared to be an increase in violence in pornographic materials. Feminists warned that: ". . . pornography is in fact escalating its misogyny, promulgating rape, mutilation, and even murder as average sexual acts, depicting the 'normal' man as a sadist and the 'healthy' woman as a willing victim" (Morgan, 1978, p. 55). Although it is not clear exactly to what extent pornographic depictions in American society have become more violent, there exists preliminary evidence from systematic content analysis of both "hard core" materials (Smith, 1976a, 1976b) and "soft core" materials such as Playboy and Penthouse magazines (Malamuth & Spinner, 1980) that violence in pornographic portrayals had increased at least throughout the 1970's. The extent of the increase in the 1980's is at this point largely unknown. There is some suggestion, however, that materials more readily available to adolescents, because of cable and VCR access, are perhaps more sexually violent than traditional X-rated materials (Palys, 1986).

Regardless of whether there has been an increase in violent images in pornography, the combination of portrayals of sex and violence in the material that is available may be especially potent for several reasons (Malamuth, 1984; Malamuth & Donnerstein, 1982). First, the pairing of sex and aggression in violent pornographic depictions may classically condition viewers to become sexually aroused to violence. It is assumed by many psychologists and psychiatrists (Abel, Blanchard, & Becker, 1978) that such conditioning processes are responsible for the behaviors of sexual offenders. Second, much aggressive pornography has as its predominant theme the idea that victims secretly desire assault, often deriving sexual pleasure from it. This may cause the viewer to believe that women want to be sexually assaulted, and even if initially resistant to sexual advances will eventually submit and even "enjoy" the aggression. Continued exposure to depictions which portray this message or "rape myth" may affect both attitudes toward sexual violence and behavior. It is precisely the

portrayal of this myth in violent pornography that may account for many of the increases in male sexual arousal to rape depictions, male perceptions and attitudes towards rape victims, and aggressive behavior against female victims following exposure to the material.

Several studies have shown that if the victim is portrayed as becoming involuntarily sexually aroused by the assault, subjects show levels of sexual arousal as great and sometimes greater than those stimulated by mutually consenting sex (Malamuth & Check, 1980a, 1980b, 1983; Malamuth, Heim & Feshbach, 1980). On the other hand, more realistic rape portrayals which depict the victim as abhorring the experience are significantly less sexually arousing than consenting portrayals (Malamuth & Check, 1980a, 1980b; Malamuth, Heim, & Feshbach, 1980).

Several studies have also shown effects for exposure to aggressive pornography on aggressive behavior in the laboratory. Subjects exposed to illustrated stories from Penthouse magazine depicting the rape of a woman with "some suggestion" of a positive outcome who were also given a communication designed to reduce inhibitions against aggression delivered significantly more electric shocks to a female confederate. Donnerstein (1980a, 1980b) conducted similar studies using short pornographic film clips. The results showed that the combination of exposure to aggressive pornography, a high level of pre-exposure anger, and pairing with a female victim resulted in the highest level of aggressive behavior (compared to neutral or nonaggressive pornographic films). However, even non-angered male subjects exposed to violent pornography showed significantly higher levels of aggression when paired with a female victim. In another experiment Donnerstein and Berkowitz (1981) showed that exposure to aggressive-pornographic films in which the movie victims appear to enjoy being roughed up or are sexually aroused while being raped tend to increase subjects' later aggression against a female even when the subjects are not angered.

Exposure to aggressive-pornographic depictions with a realistic outcome in which the victim is shown to abhor the experience, however, does not appear to result in greater levels of aggressive behavior against women by non-angered subjects, although the greater aggression is still found for angered subjects.

There is also evidence that exposure to mass media that portray violence against women in sexually nonexplicit contexts may affect males' attitudes and levels of aggressive behavior as measured in the laboratory. For example, in a field experiment Malamuth and Check (1981a) tried to determine whether the depiction of sexual violence contained in mass media nonpornographic depictions such as The Getaway and in a mass-released film with similar content influenced the viewers' perceptions of women and their attitudes towards women. In their investigation male and female students participated in a study which they were led to believe focused on movie ratings. One group of subjects watched, on two different evenings, The Getaway and Swept Away (which also shows women as victims of aggression within erotic contexts). A group of control subjects watched neutral, feature-length movies. These movies were viewed in campus theaters and as part of the "Campus Film Program." The dependent measures were scales assessing the acceptance of interpersonal violence (AIV) against women, rape myth acceptance (RMA), and beliefs about adversarial sexual relations (Burt, 1980) which were embedded in a larger scale containing many items as part of a "Sexual Attitudes Survey." Subjects reported that they saw no connection between the survey and the movies. The results showed that viewing the sexually aggressive films significantly increased male but not female acceptance of interpersonal violence and tended to increase rape myth acceptance.

In two more recent studies, Donnerstein (1983a, 1983b) and Donnerstein and Berkowitz (1983) tried to assess the impact of nonpornographic depictions of sexual violence against women on physiological arousal, attitudes toward women, and aggressive behavior in the laboratory. In the study by Donnerstein (1983)

subjects were first either angered by a female or angered by a male confederate and saw one of four types of short films. One group saw a sexually explicit aggressive-pornographic film in which a woman is attacked by a man at gunpoint, tied up and raped (violent pornography). The second group of subjects saw the aggressive-pornographic film with the sexually explicit parts edited out (a clip that might have been suitable for cable television). In this film the woman is still attacked by a man at gunpoint, tied up, slapped around and generally aggressed against; but, there was no nudity or even simulated sexual activity. The third group of subjects saw non-violent pornography. The fourth film was a non-sexually explicit, nonviolent neutral presentation. The results of this study showed that for subjects angered by a female confederate, both the violent-pornographic film and violence-only film conditions produced heightened levels of aggression. The Donnerstein and Berkowitz (1983) study showed a similar pattern of results. Angered subjects exposed to aggressive but nonpornographic materials behaved more aggressively towards a female confederate than control subjects exposed to nonviolent pornography. Attitudes about rape and subjects' willingness to say they might commit a rape were also measured. The most callous attitudes and the largest percentage of subjects indicating some likelihood of raping were found in the aggressive nonpornographic condition.

Most recently, Linz, Donnerstein, and Penrod (1984), and Linz (1985) have studied the impact of prolonged exposure to nonpornographic materials that portray violence against women in an extremely graphic fashion (R-rated slasher films). In one study, (Linz et al., 1984), men who viewed five movies depicting violence against women came to have fewer negative emotional reactions to the films, to perceive them as significantly less violent, and to consider them significantly less degrading to women. There was also a tendency for this "desensitization" to the filmed violence to "spill over" into subjects' judgments of a female victim in another context. Men who were exposed to the large doses of filmed violence

against women judged the victim of a violent assault and rape to be significantly less injured and evaluate her as generally less worthy than a control group of subjects who saw no films. An additional study (Linz, 1985) examined the relationship between individual differences in psychoticism (as measured by the SCL-90, Derogatis, 1977) and responses to R-rated, mass released movies containing sexual violence and rape on later decision making about the victim of an acquaintance rape. The results showed several consistent interaction effects with subjects with relatively high psychoticism who were exposed to the high sexual violence (rape) films more likely to endorse the use of force in sexual relations and evaluate a victim portrayed in a reenacted rape case as less credible, less worthy and less attractive.

III. Mitigating The Effects of Sexual Violence

At the end of all the experiments described above, subjects were debriefed. These debriefings generally concentrated on the unreality of the media depiction. Subjects are cautioned that pornographic and nonpornographic portrayals of women desiring, enjoying, or sexually aroused to forced sexual relations are fictitious. Material is also presented which tries to dispel common rape myths (Burt, 1980) especially any myths that have been portrayed in the stimulus materials used in the experiment.

As Sherif (1980) has pointed out, it is extremely important for experimenters in this area to evaluate the effectiveness of these debriefings. Over the last few years several followup studies of the effectiveness of these debriefings have been undertaken. Donnerstein and Berkowitz (1981) compared the responses of debriefed subjects who had been exposed to violent and non-violent pornography in their study with control subjects exposed to a neutral film who received no debriefing on seven items taken from the Rape Myth Acceptance scale and the Acceptance of Interpersonal Violence scale (Burt, 1980). Subjects in this study were followed up anywhere from two weeks to four months after participation and asked to

complete the seven item questionnaire. The results of this follow-up showed that those subjects who viewed aggressive and non-aggressive pornography who were debriefed showed less acceptance of rape myths than nondebriefed subjects (who had been exposed to non-aggressive pornography or neutral films).

More recently, Malamuth and Check (1984) conducted a study in which male and female subjects were exposed to sexually explicit stories depicting either rape or mutually consenting intercourse. Afterwards, subjects exposed to the rape version were given statements emphasizing that the depictions of rape in the stories they read were complete fantasy, and that in reality rape is a serious crime punishable by law and that victims of rape usually suffer severe psychological and physical damage after the assault. Subjects were also given specific examples of rape myths and assurance that these commonly held beliefs are indeed completely fictitious. Ten days later subjects received, in their classes, a "Public Survey." As part of the survey subjects were asked to read newspaper articles and give their opinions, one of which was an article about rape. In addition, subjects were asked questions regarding the police's decision to bring charges, the victim's responsibility for her own rape, the recommended sentence for the man if convicted, and whether they thought they themselves might rape a woman if they could be assured of not being caught and punished. Subjects were also asked to what extent victim, rapist, and societal factors contribute to rape. There were no effects for subjects' evaluation of the newspaper article on rape. Subjects who were exposed to the rape stories and then debriefed were, however, less inclined to see women as wanting to be raped, and victim behavior generally as a cause of rape compared to subjects who read the consenting story and received no debriefing. Debriefed subjects were also less likely to see rape as the result of a normal sexual tendency among males.

In another experiment, Check and Malamuth (1984), using basically the same procedures, had subjects first read rape depictions in which the victim and

assailant were either acquainted or unacquainted with one another. As in the previous study, subjects were later (two to three days) presented several newspaper stories with a story about rape embedded among them. Subjects, when exposed to the rape debriefing, gave the rapist in the newspaper report a higher sentence and saw the rape victim as less responsible for her own assault. However, these effects only happened if subjects had been exposed to an example of a rape depiction which was relevant to both the rape myths discussed in the rape debriefing and the newspaper report of the rape. Specifically, only when subjects were exposed to an acquaintance rape scenario and given a debriefing which emphasized rape myths pertinent to that acquaintance situation (e.g., a woman who goes to a man's apartment deserves to be raped) was the debriefing effective.

Further, there were no effects for receipt of the debriefing if it was preceded by a non-violent mutually consenting scenario instead of a rape scenario.

The effectiveness of debriefings used in studies of long term exposure to movies that are nonpornographic but portray violence against women in an extremely graphic manner (R-rated slasher films) have also been assessed. One aspect of these studies that is particularly noteworthy is the long term nature of these followups. Subjects who are surveyed as long as seven to eight months after participation in debriefings show significant increases in their sensitivity towards rape victims. In a study designed to assess effectiveness of the debriefing used in the Linz et al. (1984) study on long term exposure to R-rated slasher films (Donnerstein, Penrod, & Linz, 1984) subjects were assessed several weeks before participation in the study, one to three days after participation in the study and receipt of the debriefing, and again six weeks later. At each point in time subjects completed the entire Rape Myth Acceptance scale.

The debriefing used in this study was a videotaped message in which one of the principle investigators cautioned subjects that "constant exposure to violence can desensitize or harden and make people callous to violence." The part of the

message particularly relevant to the rape myths portrayed in the films used in the study emphasized that "one problem with some of the scenes in the films that you saw this week is that they tend to reinforce certain myths about rape such as the notion that women who wear provocative clothing are asking for or deserve sexual assault, or that women who put themselves in a risky situation are setting themselves up to be raped and hence are responsible for what happens. The film Spit on Your Grave, in which the woman was camping and canoeing by herself, illustrates this point." The subjects were told that research has shown that films of this type tend to reinforce and maintain these common but fictitious beliefs about rape. The results of the followup showed that immediately after participation in the study and debriefing, subjects' average scores on the rape myth acceptance scale declined relative to the pre-study participation score by a few points (although the decrement was not statistically significant). The score obtained six weeks later were nearly identical to the immediate post-participation level scores (and still a few points lower than those obtained before the study).

Perhaps more compelling is a followup study done by Linz (1985) which tried to assess the effectiveness of debriefings given to subjects who received either high (5 movies) or low (2 movies) doses of graphic filmed violence against women. As in the previous study, subjects' scores on the Rape Myth Acceptance scale were obtained before exposure to the violent films (in this case nearly two months) and again after participation in the study and debriefing. The films used in this study did not portray rape behavior per se although the films could be interpreted as propagating several myths about blaming the victim for her assault if she places herself in certain situations. Consequently, subjects were told:

Although there were no rape scenes in these films, these films tend to reinforce certain myths about rape and other forms of sexual assault. Some examples of the types of rape myths that these films may have reinforced are that "only certain types of women get raped," or that "if

a women really wanted to fend off an attacker, she could," or that "women who dress provocatively are asking to be sexually assaulted."

After receiving this message (conveyed by videotape), subjects were told they would be contacted later and were dismissed from the laboratory.

As in the previous study the effectiveness of the debriefing was assessed but instead of surveying subjects six weeks after participation, the subjects were requested to complete the Rape Myth Acceptance scale six to seven months after participation in the study and debriefing. The results of this followup showed that subjects experienced a statistically significant decline in Rape Myth Acceptance relative to their pre-study levels. Further, the decline in this index was equal in size for both the large dosage and small dosage film exposure groups.

Similar decreases in Rape Myth Acceptance after a proper debriefing can also be found among female participants in studies involving exposure to sexually violent media. Previous research on female subjects' sexual responsiveness to rape depictions indicates a tendency for women to become sexually aroused to rape depictions if the depiction emphasizes the women victims of rape becoming sexually aroused by the experience (Stock, 1983). More recently Kafka (1985) has found that females exposed to R-rated non-pornographic sexual violence (slasher films) become emotionally desensitized (less anxious and depressed) to these depictions with repeated exposure and later, when asked to evaluate a videotaped reenactment of a physical assault-rape trial were more likely to evaluate the victim of sexual assault harshly, than females exposed to other types of film.

As with studies involving males, females exposed to sexual violence were thoroughly debriefed after participation in these studies. They were warned about the possibility of becoming desensitized to the violence in the film stimuli used in the study and are also debriefed about the portrayal of various rape myths in sexually violent movies. In addition to pointing out these concerns, females in the study by Kafka (1985) also received an additional message concerning the more

general belief prevalent in our society that women are sexually aroused by force:

The sum total of rape-myth says that women enjoy rape, will be sexually aroused by force, and that they ask to be raped in subtle, if not direct, ways. One of the most common sexual fantasies for women, in fact, involves rape—a point that is not lost on the writers of best-selling romance novels. A common theme of the romance trade is that a handsome devil-hero ravishes the novel's heroine in a fit of uncontrolled passion; she later falls in love with her ravisher. The popularity of the romance novel is due in part, I think, to their ability to play on our fantasies. But important distinctions must be made between the fantasy and the fact of rape. First of all, fantasy does not typically involve violence or pain. The typical rape fantasy involves being overwhelmed gently by a man who considers one so desirable that he quote "simply cannot control himself." Second, fantasy is safe. Lots of people, male and female alike, experience things through fantasy that they would never want to experience in real life.

Fantasy is okay—and yet we know that the typical real-world rape bears little resemblance to either rape as it is depicted most often in film or to the kind of pseudo-rape which might play out in a woman's fantasy. Rape is a crime, and it is a crime of violence that has little to do with the satisfying of sexual urges. It involves coercion or threat in some form, and in a large percentage of cases, requires physical force to subdue the victim. This may result in pain or serious injury to a woman, and most women who have been assaulted respond with extreme emotional trauma. Film-depicted rape tends to gloss over unpleasantries, so consequently, it doesn't reflect reality.

Follow-up evaluations of the effectiveness of a debriefing containing this type of message have been undertaken immediately, six weeks, and six months after participation in the study and debriefing (Chapin, 1985; Kafka, 1985). The results of these evaluations indicate that exposure to sexually violent materials coupled with debriefings will produce significant reductions in rape myth acceptance (compared to a baseline measure taken several weeks before participation in the study) not only immediately but these effects will remain six months later.

IV. What Factors Mediate the Effects of Debriefings?

As we have seen, subjects participating in studies using violent pornographic depictions, as well as studies using nonviolent pornographic depictions of violence against women who have received a proper debriefing, emerge from this experience more sensitive to cultural stereotypes about violence against women.

Further, these effects have been found in studies in which subjects have been exposed to relatively large or relatively small doses of sexual violence during the experimental phase of the study, for male subjects as well as female subjects, immediately after participation in the debriefings and six to eight months after participation.

What is it about the debriefings and/or participation in the studies themselves that lead to these changes? The results of two of the studies that we have reviewed (Check & Malamuth, 1984; Malamuth & Check, 1984) suggest factors about participation in sexual violence experiments and debriefings that may be of great importance. First, as Check and Malamuth (1984) note, it is probably necessary to specifically tailor the debriefings to the types of myths portrayed in the material used during the experimental phase of the study. Debriefings which focused on rape myths not specifically portrayed in the experimental phase of the Check and Malamuth (1984) study, for example, were not effective in reducing rape myth acceptance. This finding seems congruent with the research by Donnerstein et al. (1984), Linz et al. (1985), Kafka (1985), and Chapin (1985) where debriefings were presented in a videotaped format which were interdispersed with specific examples from the material presented to subjects during the preceding phase of the experiment. Second, messages dispelling rape myths might be most effective for subjects who had first been exposed both to the rape scenarios in the experimental portion of the study and the debriefing. Debriefings coupled with pre-exposure to consenting sex scenarios in the Malamuth and Check (1984) study were relatively ineffective in changing attitudes about rape. These findings imply that it may be necessary for subjects to first become aware of increased levels of sexual arousal in response to the rape passages, or experience desensitization in the face of violent portrayals and then to receive a debriefing which addresses these processes. As Malamuth, Heim, and Feshbach (1980) point out, the debriefing might provide the subject with a certain kind of insight

comparable to that experienced by students who might become aware of racist feelings during a study on social prejudice. This may also be the case for subjects who have participated in studies using nonpornographic materials that portray rape myths.

We might add to this Nisbett and Wilson's (1977) observation that many psychological phenomena such as the inhibition of helping due to the presence of bystanders (Latané & Darley, 1970) and many experiments within the insufficient justification paradigm (Aronson & Mills, 1959) probably would not occur in the first place if people were aware of the impact of certain critical stimuli. If subjects were aware of the effects of the presence of others on their tendency to help they would undoubtedly try to counteract that influence. Similarly, as Kelley (1967) has also noted, results of insufficient justification experiments could probably never have been obtained if subjects were aware of the critical role of social pressure from the experimenter. If subjects realized that their behavior was governed by this pressure they would not have been motivated to move their attitudes into line with their behavior because they would realize that it was the result of external pressure, not their own attitudes. The debriefings used in sexual aggression experiments might provide subjects with similar sorts of insights about psychological processes. This insight might then be useful for subjects in short-circuiting the negative effects of exposure to sexual violence in the future.

To say that this process might serve to "inoculate" subjects against uncritical acceptance of rape myths (in the classic persuasion and attitude change paradigm, e.g., McGuire & Papageorgis, 1961) as have Check and Malamuth (1984), may be somewhat inaccurate, however. According to Check and Malamuth "presenting a pro-rape communication (e.g., a rape depiction likely to result in subjects perceiving the victim as a willing and perhaps blameworthy participant in the assault) and then presenting counterarguments designed to dispel such rape myths

(e.g., a rape debriefing) may serve to immunize subjects against uncritically accepting rape myths in the future" (p. 17). It is difficult to see exactly how decreased acceptance of rape myths would be predicted by an inoculation to persuasion approach as long as we adhere closely to McGuire's original formulation. It is possible, for example, that rape myths may be beliefs that are similar to the "cultural truisms" that, according to McGuire and Papageorgis, people are unpracticed at defending. As Petty and Cacioppo (1981) note, because people have no counterarguments with which to resist a persuasive message against these truisms, they remain highly vulnerable to influence. McGuire (1964) suggested that an inoculation treatment would consist of exposing people to a few pieces of counterattitudinal propaganda prior to exposure to the threatening message and showing them how to refute these arguments. According to the theory, presentation of weak counterarguments produces resistance to future attacks against the cultural truism because the inoculation poses a threat that motivates people to develop arguments to bolster their initial beliefs. Thus, relatively weak attacks (such as debriefings) might actually produce more resistance in people to future attempts to dispel rape myths, not greater critical evaluation of rape myths.

Finally, a word of caution. As the research currently stands it is difficult to tell from any of the studies reviewed if any aspect of the debriefings actually accounts for changes in subjects' rape myth acceptance or if given enough time subjects would naturally experience a change in these beliefs. Those debriefings which have been effective in changing subjects' beliefs have always been preceded by exposure to the rape depiction phase of the experiment. Consequently, it is impossible to rule out the possibility that exposure to the rape materials alone and participation in some other activity besides the debriefing, or even sufficient time for subjects to reflect or rest, might result in lowered rape myth acceptance or at least a return of rape myth acceptance to

pre-study participation levels. From a study by Malamuth and Ceniti (1986), for example, we might suggest the possibility that a rest period might result in greater sensitivity towards rape victims. These authors have found that subjects exposed to violent pornography who are asked one week later to participate in an ostensibly unrelated experiment involving the administration of aversive noise showed no increases in aggression. The findings of this study stand in apparent contradiction to the results of previous studies (Donnerstein, 1980a, 1980b, 1984; Donnerstein & Berkowitz, 1981; Malamuth, 1978). As Malamuth and Ceniti (1986) point out the important difference between these studies and the Malamuth and Ceniti study is that earlier investigations examined aggressive behavior immediately after subjects were exposed to violent pornography rather than testing for relatively long-term effects. These findings suggest that with time subjects exposed to sexual violence might return to baseline levels of hostility and aggression toward women. Rape myth acceptance among subjects exposed to violent pornography might well decline naturally with the passage of time also. However, examining the possibility of this decrement with time would involve exposing subjects to rape depictions and not debriefing them--a procedure that would be unethical.

V. Designing Interventions to Counter Sexual Violence in the Media

One way to test the idea that providing subjects with knowledge about psychological processes they may be experiencing while viewing sexual violence might counter the effects of these depictions, would be to design an experiment directed at reducing acceptance of rape myths and aggressive behavior towards women in the laboratory through the use of pre-briefings. Messages could be constructed which inform subjects about the effects of exposure to violent pornography and other forms of aggression against women administered before participation in experiments.

Recently, Bross (1985) has examined the effectiveness of a pre-film message

informing male viewers who were later exposed to large doses of R-rated slasher films about the psychological processes which might be operating. These pre-film messages explained to subjects what psychological effects might result from viewing sexually violent media. The message was similar to videotaped debriefing presented after participation in experiments involving sexually violent materials (e.g., Linz, 1985; Linz, Donnerstein, & Penrod, 1984). Clips of scenes from slasher films were interdispersed throughout the filmed message to assist subjects in understanding the effects that can be caused from viewing slasher films. Of special interest were the subjects' awareness of desensitization to violence and the possibility that viewers might come to view violent scenes less critically when they are juxtaposed with sexual ones.

Thirty-three male introductory psychology students took part in the experiment. Eleven subjects were exposed to the manipulation, while the other twenty-two were examined for comparison purposes. Subjects were informed that they had been chosen to take part in a film evaluation study and were to view six full length feature motion pictures (all R-rated slasher films) over the period of two weeks. Subjects in the experimental condition saw the pre-film message before viewing the first film. The control group simply saw the first motion picture after signing the consent form. All subjects viewed four more slasher films over the next two weeks. After each film subjects indicated how much violence they perceived in the films, how degrading the films were to women, the realistic nature of the violence and self-reported physiological arousal. On the final day of the experiment, all subjects were contacted by phone and told that the last film they were originally scheduled to see had not arrived and were asked if they would take part in a study being run by the University's Law School. All agreed and reported the next day to the law school courtroom where they viewed a videotaped reenactment of a mock rape trial. Following the viewing, subjects evaluated a number of aspects of the trial (to determine if there were any "spill

over" effects into decisionmaking in a more realistic context).

The pre-film message is a videotaped presentation with clips from slasher films edited into the tape. The message stated:

During the next two weeks we will show you six full length feature films and then will ask for your reaction to these films. The six films you will see during the next two weeks have one thing in common. They are all R-rated which means they all contain scenes of explicit aggressive behavior. In addition, the films may contain scenes of a sexual and/or erotic nature. I would not like to discuss with you the effect that this type of material can have on viewers.

One major problem with these films is that constant exposure to violence can desensitize or harden and callous people to violence in general. As an example, we will show you some scenes from these films. [Film Clip]

While you may initially find some of the violence in these films disturbing, it will perhaps become a little easier to tolerate the violence after continued exposure. This is a normal reaction. You should, however, be aware that this type of film can make people less sensitive to violent acts.

Another concern we have in reference to desensitization to violence is that many of the films that you will see are particularly violent in regard to women. For example, the following scenes are among those you will see.

We are particularly concerned about the issue of violence against women. Just as you may experience desensitization to violence after viewing these types of films you may experience the same effect with regard to violence against women. Again, you should be aware of this issue and sensitive to this problem.

A second major problem is that in many of the films an erotic or sexual scene is combined or juxtaposed with a violent scene. As an example of this type of combination, here is a scene from one of the films. [Film Clip]

This type of scene may quicken the process of desensitization that makes one more tolerant of violence. Also, such a combination places the violence in a very positive context because it occurs while the viewer is aroused or in a very positive state. Many of the violent scenes you will see are preceded by sexual, sensual, or erotic content. One potential problem with this combination is that some individuals who become sexually aroused to the sexual portion of the scene also become sexually aroused to the violent portion of the scene. Again, this is a normal reaction for some individuals but you should be aware that this type of conditioning can occur. Further, you should be aware that some individuals become less sensitive to this type of violence, especially violence against women when the violence is placed in an erotic context. You should be aware that films like these can condition people to become sexually aroused during violent scenes.

Thank you very much for your cooperation in this film evaluation study. It should be noted that this message tries primarily to increase awareness among subjects of the psychological processes which might be the result of continued exposure to slasher films, instead of a direct attempt to persuade subjects that viewing sexual violence is wrong or harmful.

The results indicated that, overall, subjects exposed to the pre-film message were less susceptible to the effects of the slasher films on the first day of the study than were those who were not exposed to the message (see Table 1). Although the differences were not statistically significant, subjects in the message condition reported seeing more violent scenes (number of scenes) and more violent scenes directed at women than did subjects in the no-message condition. Subjects exposed to the pre-film message also reported seeing more combinations of erotic and violent scenes than the non-exposure subjects on day one of the experiment. Subjects in the message condition found the day one film to be significantly more degrading to women than no message subjects. There was no discernible pattern of differences between prebriefed and control subjects' responses to the mock rape trial questionnaire.

Another finding that should be noted was the high dropout rate of subjects who had been exposed to the pre-film message. Eleven subjects were originally shown the message on day one of the study. One subject decided to not continue his participation in the study immediately after viewing the message. Over the two week experimental period, four more subjects dropped out of the study (over 45% of those originally shown the message). The no message group had only a 32% drop out rate. Comparisons between subjects who discontinued participation in the experiment and those who decided to stay throughout indicate some interesting trends. Those who dropped out of the study reported seeing more scenes of violence, more combinations of erotic and violent scenes, found the film to be more degrading to both men and women on day one than those who stayed for the

duration. Subjects who dropped out of the study also reported more physiological arousal to the first film than those who completed the entire study. The message might have convinced subjects to leave the study. In fact, one subject decided to discontinue his participation immediately after viewing the pre-film message. He stated that he did not want to be exposed to the slasher films because of the possible effects that were mentioned in the videotaped message.

The findings from this small scale study are, of course, only suggestive. The effects for the most part are only trends and even these manifested themselves immediately after the first film viewing in a two week long study. More effective may be an intervention program that assists young adults in making critical evaluations of sexual violence in the media based on what has been learned from research on mitigating the effects of TV violence on school children, a subject which we will now adddress.

Mitigating the Effects of Television Violence

Recently there has been interest among mass media violence researchers in teaching children skills to enable them to understand and evaluate what is being presented on television (Anderson, 1980; Corder-Bolz, 1982). The underlying premise has been, in general, that the media can teach behaviors, but the behaviors can also be unlearned (Eron, 1980). Of the studies undertaken, the majority have been directed at modifying children's beliefs about television--particularly beliefs about the unrealistic nature of much of what is presented (Dorr, Graves, & Phelps, 1980; Huesmann et al., 1983; Singer, Zuckerman, & Singer, 1980). Most successful of these attempts has been an intervention designed to change attitudes about aggression by Huesmann et al. (1983). The program developed by Huesmann et al. relied upon some of the major empirical developments in the area of aggression and television violence--including: the notion that children learn through the observation of aggressive models that violence can sometimes be rewarding or an effective solution to problems; that

increased identification with aggressors may facilitate aggressive behavior in viewers; and that viewing violence that is portrayed as socially acceptable or permissible may increase behavior. Huesmann et al. reasoned that even if children encoded the violent problem solving strategies they viewed on television they might be less likely to enact these strategies if they could be convinced that they are unrealistic, inappropriate, and unrepresentative of most people's behaviors.

In their study Huesmann et al. chose a sample of 169 first and third grade boys and girls who had a history of high exposure to television violence who were randomly divided into control and experimental groups, both of which received three training sessions over a 6-8 week period. Before the intervention the children were pretested for the degree to which they considered the behavior of television characters as realistic. In the first study children in the experimental condition were taught, through a series of discussions and lectures, three principles: (a) the behaviors of the characters on shows such as Starsky and Hutch and Charlie's Angels do not represent the behavior of most people; (b) the camera techniques and special effects give the illusion that characters are actually performing highly aggressive and unrealistic feats; (c) the average person uses other methods to solve their problems. This technique resulted in little change in the children's aggressiveness, as measured through a peer nomination technique (Eron et al., 1971) or as measured by frequency of violence viewing, judgments of television realism, or television character identification. Consequently, Huesmann et al. made a more direct attempt to motivate the children not to encode and later enact aggressive behaviors based on counter-attitudinal advocacy research that has been found to be effective in producing enduring behavioral changes in other domains (Cook & Flay, 1978). In the experimental group's training sessions children were first credited with the attitudes that the experimenters wished them to adopt. The children were then asked to make

videotapes for other children who had been "fooled" by television and "got into trouble by imitating it" even though they themselves knew better. Finally, the children composed persuasive essays explaining how television is unlike real life and why it would be harmful for other children to watch too much television and imitate the violent characters. A videotape of each child reading his/her essay which was then played before the entire group.

This second intervention was successful both in changing children's attitudes about television and in modifying aggressive behavior. Four months after the intervention there was a significant decline in peer nominated aggression and attitudes about the harmfulness of television violence for the experimental group. Further, analysis revealed that the strongest predictor of decreases in aggressive behavior and attitude changes about the harmfulness of television violence occurred for subjects who had a tendency to identify less with television characters. However, the intervention did not significantly reduce violence viewing or the judgments of the realism of television violence. As the reader will recall, Huesmann et al. (1983) reasoned there may be three factors contributing to the likelihood that a child would behave more aggressively as a result of violence viewing: (1) the child's perception of the violence as realistic, (2) the child's identification with the TV character; and (3) the child's beliefs about society's acceptance of aggression. Huesmann et al. (1983) have devised a successful intervention program based on these three factors. A very similar set of factors may account for the young male adult's acceptance of sexual violence against women and predisposition toward aggressive behavior following exposure to violent pornographic depictions. It is possible that an intervention designed to change males' perceptions that the portrayal of sexual violence or rape in the typical violent-pornographic film are realistic, reduce the likelihood of males identifying with the aggressor in the pornographic film and change males' beliefs about the acceptability of aggression against women, as well as providing subjects

with descriptions of the possible psychological effects of prolonged exposure to violence against women, may result in less acceptance of violence against women and lowered predispositions to aggress after exposure to violent pornographic films.

Such an attitude change program as Huesmann et al. point out may be most effective if based on prior research on cognitive consistency and the persistence of attitude change (Cook & Flay, 1978). As Cook and Flay (1978) note, programs of attitude change which involve making salient inconsistencies between attitudes and behavior (emotional role play, behavioral rehearsal, modeling) or inconsistencies with cognitions about the self seem to produce persistent attitude change. For example, observing one's own behavior usually causes greater and more persistent change than observing others behave in some counternormal way (Bandura, Blanchard, & Ritter, 1969; Mann & Janis, 1968); an attribution manipulation (in which the subject can only justify his/her counter-attitudinal behavior by referring to an internal disposition or motivation rather than some external motivation) results in greater attitude persistence than the simple receipt of a persuasive message (Miller, Brickman, & Bolan, 1975); and writing one's own counter-attitudinal message will produce more persistent change than passively reading a message (e.g., Watts, 1967). Examples of some of the long term changes caused by consistency approaches include: teaching children self-control and honesty--with effects persisting for periods to 6 weeks (Freedman, 1965; Lepper, 1973); and, reducing smoking for up to 18 months (Mann & Janis, 1968). These approaches have also produced decreases in ethnocentrism (directed toward the physically handicapped) which have persisted over 4 months (Clore & Jeffrey, 1972); and reduced phobic behavior of many kinds for periods as long as 2 years (Cook & Flay, 1978).

Operationalization of the consistency approach for changing attitudes about sexual violence might include: (1) crediting adolescent males for possession of

the attitudes we wish them to adopt; (2) inducing behaviors that would lead to the self-attribution of these attitudes; (3) inducing perceptions of personal responsibility for an outcome related to the attitudes; (4) inducing the perception of participation out of free choice, and (5) promoting the perception that the consequences of their behaviors are important. The subjects could be asked to help (in exchange for a small payment) prepare a videotape on sexual violence. This film, they would be told, will be used in area high schools to inform male adolescents who have been fooled by mass media depictions into thinking that women desire sexual violence. The subjects could then be informed by the experimenter that he/she assumes that the subjects do not really believe the message being advocated but a younger adolescent male might and therefore get himself into trouble for imitating such behavior. Subjects would then spend time composing essays on the "myths about sexual violence" which will be read and evaluated by the experimenter and then rewritten by subjects. These essays will then be read before a video camera. Subjects could be instructed to focus on the unreality of sexual aggression as presented in the media and why it is harmful to adopt attitudes which trivialize rape and sexual violence. These instructions will be presented only as rough guides as the experimenter will emphasize the need for subjects to contribute their own ideas. Each subject's videotaped reading will then be played before the entire group of subjects so that the group may evaluate the product.

This intervention procedure could be tested against a direct persuasion approach designed to teach subjects: (a) that women do not enjoy, desire or become sexually aroused by violence and rape; (b) that repeated exposure to violence against women may desensitize subjects to violence not only in the films but perhaps to the plight of other actual victims of violence. This intervention would essentially be comprised of debriefing tapes and scripts we have used in previous studies. After subjects have participated in the interventions, several

measures of intervention effectiveness could be taken, including: (1) self-reported sexual violence viewing (in a follow-up assessment); (2) ratings of realism in portrayals of sexual violence (i.e., portrayals of the myth that women desire sexual violence.); (3) general attitudes towards rape and rape victims; and (4) identification with sexual aggressors.

VI. Mass Audience Interventions

The interventions suggested above are only practical with relatively small groups of persons in a classroom or other controlled setting. Probably the most well known efforts at educating the general public about sexual violence in the media has involved large scale projects. As Malamuth (1984) notes there have been several large scale educational efforts directed at large audiences concerning subjects such as rape and rape myths (e.g. Cry Rape, Why Men Rape, A Scream of Silence) and pornography (e.g., Not a Love Story). These documentaries were expressly created to make the general public more aware of these issues.

If the effectiveness of other mass media campaigns are taken as an indication, there can be little doubt that documentaries about rape or sexual violence have great potential for informing the public about these issues if they are seen by enough people. Research evaluating the effectiveness of anti-smoking television information spots, for example, has demonstrated that these programs have been successful in increasing public awareness about the negative health consequences of smoking (Flay, 1986). But, this success has probably been the result of the large number of anti-smoking messages delivered during prime viewing times. Most public service announcement campaigns do not produce significant effects because they consist of a small number of spots, often of questionable quality delivered at unpopular viewing hours (Flay and Sobel, 1983). In order for informational programs on rape and sexual violence to be effective they must be viewed by a large proportion of the population. Even then, the most effective program for altering viewing patterns or changing attitudes about sexual violence

would include both a mass media information campaign conducted in conjunction with small more focused workshop interventions such as the program suggested above in schools or the home. Programs which have combined mass media campaigns with individualized skills training sessions have proven to be quite successful in helping the onset of adolescent smoking behavior, alcohol and drug abuse (Flay & Sobel, 1983).

A preliminary investigation into the effectiveness of the film Not a Love Story to change attitudes about pornography and sexual violence by Bart, Freeman and Kimball (1984) suggest that viewers may benefit from exposure to this film. Bart et al, surveyed a group of 332 males and 318 females after they had viewed this film in an art film house in the Chicago area. The findings indicated that exposure to the film resulted in changes in beliefs and attitudes about pornography (e.g., "I didn't know pornography was that violent", "The film made me angrier about pornography"). Unfortunately, because the film audience was a naturally occurring group only self reported attitude change data was collected by the investigators (i.e., subjects were asked if their attitudes about pornography changed after viewing the film). No attempt was made to assess pre-film viewing attitudes or compare the film-viewers attitudes with a matched sample of control subjects.

It should be noted that programs concerning rape and sexual violence aimed at large audiences may also result in serious unintended consequences (Malamuth, 1984). These films may contain explicit sexual depictions and rape scenes that would be sexually arousing to some members of the audience. This arousal may interfere with the attitude changes sought by the films producers. In addition, these films often contain interviews with convicted rapists or other persons who may express rape myths. Certain audience members may process only that information which supports their preconceptions about rape and rape victims.

VII. Scientifically Adequate Evaluations of Intervention Programs

Because of the possibility of unintended consequences arising from mass media programs and because of the fact that any discussion of sex or rape related issues in the mass media is far from acceptable to many Americans there is a need to proceed with some caution when designing any intervention program. Thus, while it is necessary to conduct "formative evaluations" of any program in order to collect information on preliminary implications of outcomes before the program is implemented on a wide scale, it is particularly true of this area. The fact that Not a Love Story was restricted to certain types of educational theaters by the Ontario, Canada film board because members of the board felt that film might be misunderstood by the causal movie going public is illustrative of this concern. Social scientists or other parties interested in creating educational programs for widespread distribution should be especially vigilant about evaluating their programs at each point in the development stage to avoid the possibility of creating programs unacceptable for large segments of the audience (or at least objectionable to a vocal minority of viewers who are likely to unduly influence decisions by local broadcast television or educational distributors).

Any intervention program developed to counter the effects of sexual violence in the media should also be subject to rigorous "summative evaluation" in which the desired outcomes of the program once implemented are assessed. It is not the intent of this report to present a detailed list of procedures for methodologically sound program evaluation. Such advice can be obtained from several sources (e.g., Flay & Best, 1982). It is appropriate to note that none of the debriefing projects discussed in this paper would qualify as intervention programs appropriately designed and evaluated. The more obvious procedural omission in the debriefing research described here is the lack of "attention--placebo groups" who undergo the same or similar activities as recipients under test but do not receive the actual components of the program

assumed to be responsible for attitude or behavioral changes. The use of attention control groups is, as we have mentioned before, unethical. Researchers who have exposed their subjects to depictions of sexual violence cannot manipulate characteristics of their debriefings in order to eliminate essential components for one group or another. It is important to recognize that no truly adequate scientific evaluation of interventions designed to mitigate the effects of sexual violence in the media can be accomplished unless at least this minimum requirement is met.

VIII. Summary and Conclusions

In this paper we first discussed research findings in the domain of sexual violence including pornographic and nonpornographic depictions of violence against women. We noted that research on the effectiveness of debriefings following participation in these studies indicates that subjects who participate in experiments involving exposure to sexual violence and who receive an appropriate debriefing emerge from this experience more sensitive to the issues of violence against women and rape than before participation. This suggests that a program based on the best features of programs designed to counter the effects of television violence and debriefings from sexual violence experiments might be effective in providing adults with the critical viewing skills necessary to counter the effects of exposure to violence against women in the media.

In closing we might add that while programs designed to mitigate the effects of sexual violence on young adults are certainly worth undertaking, waiting until late adolescence or early adulthood to teach critical viewing skills may, in fact, be waiting too long. A recent report on the viewing patterns of a sample of 4,500 children in England and Wales (countries that have declared many of the sexually violent films which receive an R-rating in the United States to be "obscene") indicates that by the ages of 7 and 8, 6.5 percent of boys in those countries have seen the movie I Spit on Your Grave. The percentage climbs to nearly 20 percent

by age 13-14 (Hill, Davis, Holman, & Nelson, 1984). Comparable data for the United States is not currently available. One can probably safely assume that if 20 percent of pre-adolescent males have seen a film declared liable for prosecution, and thus relatively scarce in Great Britain, a much larger number of pre-adolescents have probably been exposed to such films in the United States. In addition, with the current availability of home videocassette players, and cable television services devoted to "adult" entertainment--much of which may include sexual violence--we should expect that an even greater number of young children will be exposed to these materials in the future.

We have attached as Appendix 1 an overview of a multimedia educational program designed by the Media Action Research Center in New York which we believe can address many of the issues we have discussed. The program is intended for those in the 11 to 18 year old age range and could become part of sex education or media courses in the schools. This particular program is currently being considered for funding by various foundations.

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Figure 1. Rape Myth Acceptance Scale Items

1. A woman who goes to the home or apartment of a man on their first date implies that she is willing to have sex.
2. Any female can get raped.
3. One reason that women falsely report a rape is that they frequently have a need to call attention to themselves.
4. Any healthy woman can successfully resist a rapist if she really wants to.
5. When women go around braless or wearing short skirts and tight tops, they are just asking for trouble.
6. In the majority of rapes, the victim is promiscuous or has a bad reputation.
7. If a girl engages in necking or petting and she lets things get out of hand, it is her own fault if her partner forces sex on her.
8. Women who get raped while hitchhiking get what they deserve.
9. A woman who is stuck-up and thinks she is too good to talk to guys on the street deserves to be taught a lesson.
10. Many women have an unconscious wish to be raped, and may then unconsciously set up a situation in which they are likely to be attacked.
11. If a woman gets drunk at a party and has intercourse with a man she's just met there, she should be considered "fair game" to other males at the party who want to have sex with her too, whether she wants to or not.
12. What percentage of women who report a rape would you say are lying because they are angry and want to get back at the man they accuse?
13. What percentage of reported rapes would you guess were merely invented by women who discovered they were pregnant and wanted to protect their own reputation?
14. A person comes to you and claims they were raped. How likely would you be to believe her/his statement if the person were:
 - . . your best friend?
 - . . an Indian woman?
 - . . a neighborhood woman?
 - . . a young boy?
 - . . a black woman?
 - . . a white woman?

Table 1. Day One Mean Scores on Film Evaluation Items

Item	Pre-film Message (n = 10)	Message (n = 20)	No changes in self-Trait (p) and memory of Probability and scene details (p)
Number of violent scenes	3.8	3.36 very diff. 9.97 representing reinforcement of the stimulus line to beer	
Violence towards women	1.6	1.0 signif. 10.91 representing reinforcement of the stimulus line to beer	
Combinations of eroticism and violent scenes	1.4	0.08 no diff. 15.09 representing reinforcement of the stimulus line to beer	
Degrading to women	0.12	0.05 signif. 4.96 no diff. 0.03 representing reinforcement of the stimulus line to beer	
Realistic violence	0.9	4.00 signif. 21.88 representing reinforcement of the stimulus line to beer	

*Adapted from: Gross, M. S. (1984). Effect of pre-films messages of viewer memory perceptions of slasher films. Unpublished masters thesis, University of Wisconsin, Madison, WI. 168 questionairre items. A portion is changed and/or revised by Justice

Microscopicu neri vasm bas. deceri ad ei daliu anatoceropodu se evad remov vasm. 81
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and the end of the "so-called" determinants of human life, let us
not to do this and prevent this and now we even do this.

selected grain size was 100 mm below each a dredger and a barge to aggregate sand. 151
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APPENDIX I

THE VISION OF THE PROJECT: PROGRAM OVERVIEW

This project is a multimedia educational program designed as an intervention strategy to help young people understand the nature and influence of sexually violent media and the nature of sexually violent behavior and its impact on individuals and society.

Target Group

The audience we have determined to be most at risk from sexually violent media are seventh through twelfth grade, from eleven years of age to seventeen.

This age group has the skills and developmental maturity to understand the concepts and yet are still in the formative stages and likely to assimilate new attitudes both positive and negative. The men in this age group also shape and reach their sexual maturity and identity. The women establish their role and identity with peers of both sexes.

It is our intent to create a program that can achieve acceptance in the school, church and home with this target group.

Educational Curriculum Goals

1. To increase awareness of the problem;

2. To help young people cope with the potential negative effects of the increased quantity and increased access to sexual violence and sex/violence in the media;

3. To develop critical viewing skills;

4. To change viewing habits;

5. To motivate positive active response to media;

6. To generalize the problem from the video experience to other media;

7. To increase the awareness of real-life sexual assault and its effect on people;

8. To demythologize media by showing the real people behind the scenes;

9. To understand the nature of myths and stereotypes; and how media reinforces them;

10. To empower young people to be discerning in their response to media.

Program Modules

The program consists of five modules to be used in five sessions or more. Each module contains:

- a) a 10-15-minute video program; guide a facilitator as teacher and
the video is started and facilitated a case study discussion of violence
- b) student information and activities booklet and book library
which are also available
- c) teacher and leaders guide
- d) a promotion community packet

2. Mixed Messages, Myths and Stereotypes

A presentation of the messages in myths reinforced by sexual violence in the media. This module portrays the nature of media power in conveying misconceptions. Students discuss their ideas about myths and reality and monitor their own attitude changes.

interviews of victims and offenders of sexual violence provide the basis for discussion. The impact of sexual violence is taken out of the realm of the media and into the real world for close scrutiny and discussion.

4. Who, Why and How

Highlights the economic issues of the industry and the film, music videos, video tapes, etc., and explain the various roles people play and the functions they perform in producing and distributing media with an emphasis on sexually violent media. Interviews and discussions with producers and performers accent this program.

5. The Educated Media Consumer

Reinforces an active, rather than a passive consumer role. Provides critical skills for critical viewing. Provides projects which allow students to create storyboards and tapes acting as producer and director and performers.

W. J. G. van der Veen, J. J. M. van der Wal, and J. J. M. van der Wal, *Environ. Monit. Assess.* 10, 231 (1990).

ELEMENTS OF THE EDUCATIONAL CURRICULUM

Our project will use both exposition and interaction in its curriculum approach. This makes the program a dynamic and individualized process depending heavily on student input. It is responsive to current programming and current film or video offerings at any given time and allows for the expression of individual interests, insights and needs of each participating group of young people.

The teacher's guide offers direction in presenting the expository sections and offers questions and follow-through activities. It also provides various dynamic strategies such as simulations, improvisations and other kinds of open-ended activities to facilitate awareness. These activities also provide the opportunity for students to monitor their own biases and changing attitudes.

The program material is designed both for classroom and at home. Involving teachers and parents in the educational process in a non-judgmental, non-prescriptive way diffuses the "charged" nature of the program material.

These motivational elements provide the nucleus for follow-up in group discussion, simulation learning activities and individual expression.

However, a generalized pedagogy needs measurable learning objectives. Because we believe this curriculum is so essential to our schools, we propose to evaluate the following objectives.

After participating in the five modules, students will be able to achieve the following objectives. These objectives are designated to be part of the formative validation studies and summative reviews to be conducted:

1. Identify examples of sexualized violence in the media. (Module 1)
2. List possible effects of such violence. (Modules 1, 2, 3, 4)
3. Cite examples of how media portrayals have influenced their own attitudes and behaviors. (Modules 2, 3, 4)
4. Identify common myths and misperceptions regarding rape and sexualized violence as portrayed in the media. (Modules 2, 5)
5. Critically evaluate sexually violent programming so as to mitigate potentially negative effects. (Module 3, 5)
6. Explain the role the media consumer plays in program availability. (Module 5)