Four Major Effects of Viewing Violence in Mass Media

- **Aggressor effect:** Increased meanness, aggression, and violence toward others
- **Victim effect:** Increased fearfulness, mistrust, and self-protective behavior
- **Bystander effect:** Increased desensitization, callousness, and apathy toward victims
- **Appetite effect:** Increased self-initiated behavior to see more violent material

(T tongren, Donnerstein, & Eron, 1994; Gentile, 2003)

Two Major Effects of Viewing Prosocial Behavior in Mass Media

- **Prosocial effect:** Increased helpful behavior toward others
- **Antiviolence effect:** Decreased violence toward others

- Importantly, these effects are not just short term. Children who watch more prosocial shows at home are more prosocial at school.

(Donnerstein, Eron, & Eron, 1994; Calvert, 1999, p. 222)
U.S. Surgeon General in a report to Congress

- "It is clear to me that the causal relationship between televised violence and antisocial behavior is sufficient to warrant appropriate and immediate remedial action. … There comes a time when the data are sufficient to justify action. That time has come."

U.S. Surgeon General Jesse Steinfeld
March 1972

Joint Statement

"Although a wide variety of viewpoints on the import and impact of entertainment violence on children may exist outside the public health community, within it, there is a strong consensus on many of the effects on children’s health, well-being and development.

"There are some in the entertainment industry who maintain that 1) violent programming is harmless because no studies exist that prove a connection between violent entertainment and aggressive behavior in children, and 2) young people know that television, movies, and video games are simply fantasy. Unfortunately, they are wrong on both counts.

"...numerous studies… point overwhelmingly to a causal connection between media violence and aggressive behavior in some children. The conclusion of the public health community, based on over 30 years of research, is that viewing entertainment violence can lead to increases in aggressive attitudes, values and behavior, particularly in children.


W1 Violent Game Play
W2 Aggressive Cognitions
W3 Aggressive Behavior

Sex Age

Indirect effect: $\beta = .07, p < .001$

Model Fit: $\chi^2 = 16.97 \ df=2, pc.001$
RMSEA = .02
CFI = .98

Controlled but paths not shown
Violent (VGV) and Prosocial (PVG) Gaming Longitudinal Effects on Empathy (EMP) and Helping Behaviour (HELP), controlling for Sex and Amount of VG Play

Catharsis?

- It has been long hypothesized that watching violent media or playing violent video games allows people to “blow off steam” and actually makes them less likely to act aggressively in the real world

- There are at least 4 problems with this theory
Catharsis?

1. Drive theory model not appropriate
2. Aristotle had very clear ideas about what was necessary for catharsis to happen, most notably that FEAR and PITY had to be felt
3. Many studies have been performed to show this -- In 40 years of research, there is no substantiation of the catharsis hypothesis
4. It’s not how the brain works

“We are shaped by our thoughts; we become what we think.”  Buddha
“We are what we repeatedly do. Excellence, then, is not an act, but a habit.”  Aristotle
“Abreunt studia in mores.” (Pursuits become habits.)  Ovid
“Whenever you are angry, be assured that it is not only a present evil, but that you have increased a habit.”  Epictetus
“The chains of habit are generally too small to be felt until they are too strong to be broken.”  Samuel Johnson
“Sow an act, and you reap a habit. Sow a habit, and you reap a character. Sow a character, and you reap a destiny.”  Charles Reade
“Habit is second nature, or rather, ten times nature.”  William James
“Motivation is what gets you started. Habit is what keeps you going.”  Jim Rohn

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<tbody>
<tr>
<td>Number of participants</td>
<td>54</td>
<td>25</td>
<td>86</td>
<td>25</td>
<td>17</td>
<td>15</td>
<td>381</td>
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<td>Aggressive thoughts</td>
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<td>-.23</td>
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<td>-.17</td>
<td>.27</td>
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<td>-.23</td>
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<td>.19</td>
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<td>.19</td>
<td>.16</td>
<td>.19</td>
<td>.29</td>
<td>.14</td>
<td>.19</td>
<td>.19</td>
<td>-</td>
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<tr>
<td>Prosocial behaviors</td>
<td>-.16</td>
<td>-.22</td>
<td>-.30</td>
<td>-.10</td>
<td>-.08</td>
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Video Game Meta-Analysis of over 100 Studies

<table>
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<tr>
<th>Category</th>
<th>K</th>
<th>N</th>
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<tbody>
<tr>
<td>Aggressive Cognition</td>
<td>36</td>
<td>10,411</td>
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<tr>
<td>Aggressive Affect</td>
<td>26</td>
<td>6,143</td>
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<tr>
<td>Physiological Arousal</td>
<td>9</td>
<td>438</td>
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<tr>
<td>Desensitization/Low Empathy</td>
<td>36</td>
<td>4,298</td>
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<tr>
<td>Aggressive Behavior</td>
<td>48</td>
<td>14,226</td>
</tr>
<tr>
<td>Prosocial Behavior</td>
<td>8</td>
<td>4,734</td>
</tr>
</tbody>
</table>

Anderson et al., 2010

• Interesting thing 1: They pretty much all find exactly the same thing
• Interesting thing 2: Yet, Ferguson and Sherry claim that these results show no effects…
  – Ferguson said it is a “scientific urban legend” that video games affect behavior, saying “it had been thoroughly refuted in scientific literature” (Herald Sun, Sept. 14, 2012)
• Interesting thing 3: But even they agree that violent games influence aggressive feelings, arousal, and thoughts
Size of the Effect

- Smoking & Lung Cancer
- Media violence & aggression
- Condom use & sexually transmitted HIV
- Secondhand smoke & lung cancer
- Lead exposure & children's IQ scores
- Nicotine patch & smoking cessation
- Calcium intake & bone mass
- Homework & school achievement
- Asbestos exposure & laryngeal cancer
- Self-exam & extent of breast cancer


Correlation

Why does it sometimes look like there’s no effect?

Hitting Someone

Exact same effect on both, but you only see it for one!

Media Violence
Prior Fights
Uninvolved Parents
Poverty
Been Bullied
Normative Beliefs about Aggression
Hostile Attribution Bias
Sex

The Industry’s Response

- “Computer games don’t affect kids; I mean if Pac-Man affected us as kids, we’d all be running around in darkened rooms, munching magic pills and listening to repetitive electronic music.” Kristian Wilson, CEO, Nintendo Gaming Corporation, Inc, 1989

- Doug Lowenstein, President of the Entertainment Software Association
Partial list of the organizations on record saying the evidence shows that media violence causes aggression in society:

- U.S. Surgeon General (1972, 2001)
- National Institutes of Mental Health
- American Medical Association
- American Academy of Pediatrics
- American Psychological Association
- American Psychiatric Association
- American Academy of Family Physicians
- American Academy of Child & Adolescent Psychiatry
- National Association for the Education of Young Children

Known Risk Factors for Aggressive Behavior

<table>
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<tr>
<th>Antisocial Behavior</th>
<th>Personal Characteristics</th>
<th>Family Characteristics</th>
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<tbody>
<tr>
<td>Physical Violence</td>
<td>Gender</td>
<td>Antisocial Parents</td>
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<tr>
<td>Aggression</td>
<td>Ethnicity</td>
<td>Abusive Parents</td>
</tr>
<tr>
<td>Problem Behaviors</td>
<td>IQ</td>
<td>Broken Home</td>
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<tr>
<td>Substance Use</td>
<td>School Performance</td>
<td>Parent-Child Relations</td>
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<tr>
<td></td>
<td></td>
<td>Socioeconomic Status</td>
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</table>

Risk and Resilience Approach

- There have been several calls to consider aggression within a risk factor public health approach (Browne & Hamilton-Giachritsis, 2005; Centers for Disease Control and Prevention, 2008; Dodge & Pettit, 2003; Gentile & Sesma, 2003; US Surgeon General, 2001)

- Nonetheless, one critic has recently dismissed this approach, saying that it is "non-scientific" because it is "fundamentally unfalsifiable" (Ferguson, 2009, p. 118).
Theoretical Predictions

- Testable predictions:
  1. The presence of an individual risk factor for aggression should increase the likelihood of aggressive behavior.
  2. The presence of protective factors should lower the likelihood of aggressive behavior, even in the presence of risk factors.
  3. The presence of multiple risk factors should increase the likelihood to a greater extent than any one

Effect of Each Risk Factor Holding Others Constant

<table>
<thead>
<tr>
<th>Hostile Attribution Bias</th>
<th>Parental Involvement</th>
<th>Preference for violence in VGs</th>
<th>Physical Victimization</th>
<th>Sex</th>
<th>Media Violence Exposure</th>
<th>Physical Fights Time 1</th>
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<tbody>
<tr>
<td>Low Risk</td>
<td>35%</td>
<td>40%</td>
<td>42%</td>
<td>45%</td>
<td>40%</td>
<td>44%</td>
</tr>
<tr>
<td>High Risk</td>
<td>35%</td>
<td>36%</td>
<td>34%</td>
<td>43%</td>
<td>32%</td>
<td>32%</td>
</tr>
</tbody>
</table>

Relative Weights Analysis

In contrast: Conventional regression yields β=.16, suggesting 2.6% of variance explained.
Hypothesis 2: Protective Factors

- Low parental involvement
- Median parental involvement
- High parental involvement

Likelihood of involvement in a Fight (T2)

- Risk on Sex, Physical Victimization, & Fight (T1)

Quadratic $R^2 = .39$, $F(2,401) = 125.73$, $p < .001$

Linear $R^2 = .31$, $F(1,402) = 178.51$, $p < .001$

Hypothesis 3: Accumulation of Risk

- Media Violence Exposure

Likelihood of involvement in a Fight (T2)

- Low
- High

Hypothesis 3: Accumulation of Risk

Quadratic $R^2 = .39$, $F(2,401) = 125.73$, $p < .001$

Linear $R^2 = .31$, $F(1,402) = 178.51$, $p < .001$
Predicting the Likelihood of T2 Fights from Number of Risk Factors Present

Adapted from Gentile & Bushman, in press

Risk Factors include: Sex, High Prior Physical Aggression, low Parent Involvement, High Hostile Attribution Bias, High Physical Victimization, High Preference for Violent Video Games, and High Media Violence Exposure

Violence in Schools
(Based on 1998 data)

36 DEATHS
257,700 SERIOUS INJURIES
990,500 THEFTS OR LARCENIES
1,562,300 REPORTS OF FIGHTING
18,000,000 INCIDENTS OF BULLYING

Conclusion

• Media violence has somehow achieved what seems to be a special status
• It acts just like every other risk factor
• It deserves neither special concern nor special denial
• We hope that this approach can help:
  – Provide new statistical techniques
  – Cool the rhetoric around media violence

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www.DrDouglas.org
www.psychology.iastate.edu/faculty/dgentile