The Effect of Violent Videogames on Aggression

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Background
- Much research suggests that exposure to videogame violence increases physiological and self-report measures of aggression (e.g., Eron & Dill, 1998).
- It is not clear whether this increase is due to the exposure to violence per se or to other variables.
- In addition, previous research explored computer-based or X-box/PlayStation games.
- Flash-based online games are more readily available and are often less elaborate.

Experiment 1: Game selection

<table>
<thead>
<tr>
<th>Violent game: Highway</th>
<th>Mildly violent game: Pursuit 2</th>
<th>Non-violent game: Tetris</th>
</tr>
</thead>
<tbody>
<tr>
<td>First-person shooter game with animate targets and some gore</td>
<td>Third-person shooter game with inanimate targets and no gore</td>
<td>Puzzles only</td>
</tr>
<tr>
<td>Moderately paced</td>
<td>Started at an advanced level to control for pace and difficulty</td>
<td>No self-paced</td>
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</tbody>
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Participants and procedure.
- 8 college students
- Played each game for 10 min (order of game presentation randomized across participants)
- Completed Game Complexity Questionnaire for each game
- Did six questions (rating scale from 1 to 5):
  - Overall, how difficult was it to learn the game?
  - Was it difficult to learn how to use controls for the game?
  - How quickly did you learn controls for the game?
  - Did you find the game so difficult that you became frustrated?
  - How would you rate the pace of the game?
  - How hard were you trying to win the game?
- Make sure that the most violent game is not the most fast-paced/difficult/frustrating game.
- In addition, recorded frequency of videogame playing for each participant.

Experiment 1: Results

<table>
<thead>
<tr>
<th>Question 1: Overall, how difficult was it to learn the game?</th>
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<tbody>
<tr>
<td>Non-violent game rated significantly less difficult than violent game</td>
</tr>
<tr>
<td>Mildly violent game rated significantly less difficult than violent game</td>
</tr>
<tr>
<td>No difference between violent and mild violent game</td>
</tr>
<tr>
<td>No difference between violent and non-violent game</td>
</tr>
</tbody>
</table>

| Question 2: Mildly violent game is rated significantly more difficult than other games |
| Question 3: Mildly violent game is rated significantly more difficult than other games |
| Question 4: Mildly violent game is rated as more fast-paced than mildly violent game |
| Question 5: Non-violent game is rated as more fast-paced than mildly violent game |
| Question 6: No difference between non-violent and violent game |

Summary:
The ratings of frustration produce an opposite order: non-violent game is the most frustrating, followed by mildly violent game and violent game.

Experiment 2: Effect of game-playing on aggression

Participants and procedure.
- 18 college students
- Random matched assignment by gender
- Told that the goal of the study is to investigate how frustrating it is to learn a new videogame
- Three baseline measures prior to game
- Saliva sample to measure cortisol, Word Completion Task, State Hostility Scale
- Played assigned game for 30 min
- Two measures:
  - Word Completion Task
  - State Hostility Scale

Conclusions
- None of the three measures followed the increase in violence of the game.
- Word Completion Task produced increase in aggressive completions after playing non-violent game.
- State Hostility Scale produced increased scores after playing any game.
- Concentration of cortisol increased after playing mildly violent game, but decreased after playing violent game.
- This suggests that other dimensions of the game (e.g., level of frustration or difficulty of learning controls) may affect these measures more than the level of violence.
- This is an important finding as the increase in these measures is commonly interpreted as an increase in aggression associated with exposure to violence.
- Next step: collecting more data to confirm our findings.

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References