Emergency Assistance in Video Games: Selflessness or Self-Righteousness?

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1. Overview

Research Question

Do situations of violently helping others (emergency assistance) in video games reinforce

- violent behavior,
- helping behavior,
- or both

?

1. Overview

Why it's important

- Most popular genre are shooters (58%), directly followed by role-playing-games (55%) (Annenberg Studies on Computer Games Group)
- Situations of emergency assistance are typical for role-playing-games, where the heroic player has to protect "good" people by fighting "evil" people (e. g. saving a princess from a villain).
- And situations like these are also relevant in real-life, as they resemble extreme forms of situations of moral courage (e. g. the case of „Dominik Brunner").

1. Overview

Current State of Research

- The General Aggression Model (GAM) predicts that in-game violence reinforces real-life aggressive behavior and reduces real-life prosocial behavior.
- Recent meta-analyses (Anderson & Bushman, 2001; Anderson 2004; Anderson et al., 2010) support this prediction.
- The General Learning Model (GLM) predicts that in-game helping reinforces real-life prosocial behavior.
- Early studies by Greitemeyer and Osswald (2009; 2010) and Gentile et al. (2009) support this prediction.

1. Overview

Limitations

- There exist no studies on the combined effect of in-game violent and helping behavior (=emergency assistance).

2. Hypotheses

Violent Behavior

Replication

H_1: In-game killing increases real-life violent behavior.

New

H_2: In-game emergency assistance increases real-life violent behavior.

New

H_3: In-game killing increases real-life violent behavior more than in-game emergency assistance.

2. Hypotheses

Violent Behavior (H_3)

- In comparison to a pure violent situation, situations of emergency assistance also contain some form of helping.
- But in situations of emergency assistance, helping occurs as nonviolently as possible.
- Therefore, in pure violent situations more violent behavior should occur than in situations of emergency assistance.

2. Hypotheses

Helping Behavior

Replication

H_4: In-game helping behavior increases real-life helping behavior.

New

H_5: In-game emergency assistance increases real-life helping behavior.

New

H_6: In-game helping behavior increases real-life helping behavior more than in-game emergency assistance.

2. Hypotheses

Helping Behavior (H_6)

- In comparison to a pure helping situation, situations of emergency assistance also contain some form of violence.
- But there is a strong inhibition to use violence against others.
- If helping is only possible by using violence, chances are that helping does not occur at all.
- Therefore, in pure helping situations more helping behavior should occur than in situations of emergency assistance.

3. Independent Variables

Independent Variables

IV A: In-game killing

- **Killing**: In-game characters (bandits) have to be killed in order to solve a quest. This is accomplished by fighting.
- **No Killing**: In-game characters cannot be killed. The quest is accomplished by sneaking.

IV B: In-game helping

- **Helping**: The questgiver (a damsel in distress) has to be helped in order to solve the quest.
- **No Helping**: The questgiver (a damsel without distress) cannot be helped.

3. Independent Variables

Operationalisation

- RPG „The Elder Scrolls IV: Oblivion“
- In-game tutorial to teach controls
- Fighting tutorial in violent conditions
- Game ends when quest is solved
- Average game-time comparable to other experiments (normally 20 minutes)

Duration	Killing	Emergency	Helping	Treasure
Tutorial	4.6	4.3	2.9	2.9
Quest	22.3	22.5	21.7	19.7

3. Independent Variables

Design

N = 186	Killing	No Killing
Helping	Emergency Assistance	Help
No Helping	Kill	Treasure Hunt

Questgiver

- Killing
- Treasure Hunt

No Helping

Helping

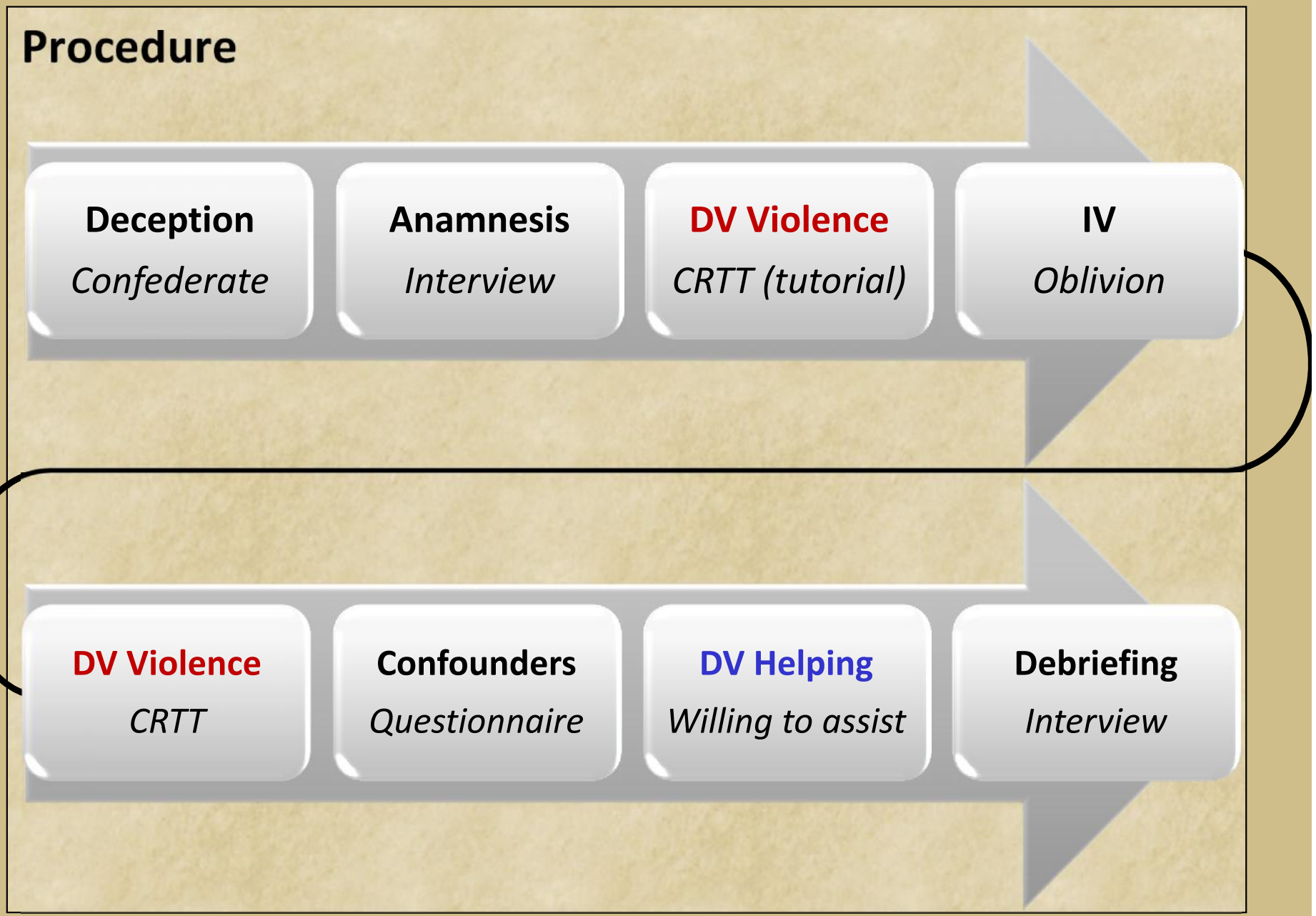
- Emergency A.
- Helping

Bandits

Bud Bandit

Boss Bandit

4. Procedure



5. Dependent Variables

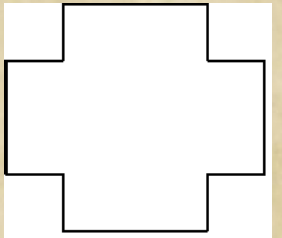
Dependent Variable A: Violent Behavior

- Competitive Reaction Time Task (CRTT)
- Cover story: compete 25 rounds against another participant in a reaction time test
- At the beginning of each round, set the intensity and duration of a sound shock your opponent will receive if he looses
- There is no opponent, participant wins 12 rounds
- Violent behavior is operationalized as the product of intensity and duration in the **first** round
- Training phase prior to video game in order to minimize time between treatment and measurement

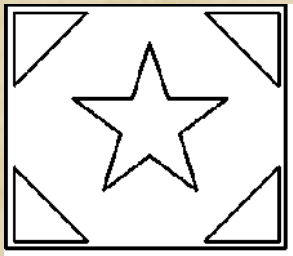
5. Dependent Variables

Dependent Variable B: Helping Behavior

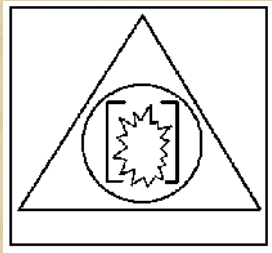
- Willingness to assist (computer based)
- Cover story: graduand wants to investigate how much concentration remains after long experiments
- Participant has to indicate how many items (between 0 and 200) he/she wants to solve; program crashes afterwards
- Long duration of experiment to minimize time pressure



Easy



Medium



Hard

6. Subjects

Subjects

- Experience with controls is required
- Students in Osnabrueck
- Sample size *N* = 186 (*n* = 139 university; *n* = 47 college)

7. Manipulation-Checks

Treatment

- Amount of violence
  - Quest: t (133)=22.93, g=3.43***
  - Content: t (184)=6.63, g=0.97***
- Amount of helping
  - Quest: t (184)=3.77, g=0.55***
  - Content: t (184)=4.59, g=0.67***

Hedges *g*
Standardized mean difference
.20 = small
.50 = medium
.80 = large

on a scale of 1 to 5

Mean	Kill	Emergency	Help	Treasure
Violence: Quest	**4.4**	**4.0**	1.2	1.2
Violence: Content	**3.5**	**3.3**	2.4	2.3
Help: Quest	2.6	**3.1**	**3.5**	2.6
Help: Content	1.9	**2.6**	**2.9**	2.3

8. Results

DV Violent Behavior

H_1: In-game killing increases violent behavior

Kill > Help: (M_1= 2.96; M_2= 2.21), t (182)=2.14, g=0.46*

Kill > Treasure: (M_1=2.96;M_2=2.27), t (182)=1.96, g=0.40*

H_2: In-game emergency assistance increases violent b.

Emergency > Help: (M_1=2.82; M_2=2.21), t (182)=1.76, g=0.37*

Emergency > Treasure: (M_1=2.82; M_2=2.27), t (182)=1.58, g=0.31

H_3: In-game killing increases violent b. more than in-game emergency assistance

Kill> Emergency: (M_1=2.96; M_2=2.82), t (182)=0.38, g=0.07

Hedges *g:* .20 = small; .36 = meta-analysis; .50 = medium; .80 = large

8. Results

DV Helping behavior

H_4: In-game helping behavior increases helping behavior

Help > Kill: (M_1=22.13; M_2=18.91), t (182)=0.92, g=0.18

Help > Treasure: (M_1=22.13; M_2=18.29), t (182)=1.11, g=0.22

H_5: In-game emergency assistance increases helping b.

Emergency > Kill: (M_1=11.69; M_2=18.91), t (182)=−2.06, g=−0.46*

Emergency > Treasure: (M_1=11.69; M_2=18.29), t (182)=−1.89, g=−0.42*

H_6: In-game helping behavior increases helping b. more than in-game emergency assistance

Help > Emergency: (M_1=22.13; M_2=11.69), t (182)=2.98, g=0.62*

Hedges *g:* .20 = small; .32 = meta-analysis; .50 = medium; .80 = large

9. Discussion

Violent Behavior

- The hypothesis „In-game violence increases violent behavior“ was confirmed.
- The hypothesis „In-game emergency assistance increases violent behavior“ was marginally confirmed.
- But one third of the participants suspected that the CRTT measures aggression **before it was conducted.** This could have reduced the effect size due to social desirability.
- All in all, emergency assistance seemingly increases violent behavior.

9. Discussion

Helping Behavior

- The hypothesis “In-game helping increases helping behavior” could not be confirmed. This could be due to the weak treatment.
- The hypothesis “In-game emergency assistance increases helping behavior” could not be confirmed. Seemingly, the opposite seems to be true.

10. General Discussion

Usefulness for advancement of theories

- Results replicate preceding studies
  - In-game violence increases violent behavior
  - In-game helping could increase helping behavior
- First insights about emergency assistance
  - In-game emergency assistance seemingly increases violent behavior and at the same time reduces helping behavior
  - Results in accordance with moral management model
  - In the light of this model, one could say that in-game **emergency assistance does not lead to selflessness, but to self-righteousness**
  - But replication is needed as these hypotheses were not postulated a priori

10. General Discussion

Usefulness for applications and everyday life

- In video games, assisting a character in an emergency seems to undermine moral thinking (at least for a short amount of time)
- There is a risk that regular use of violent games could permanently reduce moral thinking
- Do we have to shun from violent entertainment or can we protect ourselves from the negative consequences?
  - Maybe we should constantly remind ourselves that our actions are not in accordance with moral rules?
  - Maybe we should not disengage the moral concerns but instead suffer from the arising negative emotions even if this reduces the entertaining effect?

Thank you very much for your interest !