Psychology of Conflict, Risk and Safety <u>Master Thesis</u>

Media-Effects of Fail-Videos on Risk Perception and Risk-Taking

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Abstract

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The world around us is full of positive risk glorifications, with TV-programs blamed for inspiring copycatting behavior that have led to several deaths. This study is a first scientific attempt to analyze the influence of media-stimuli depicting risky behavior on human risk-taking intentions and risk perception. By utilizing an online randomized controlled trial involving 239 participants, four experimental conditions and one control group were created with four different versions of the same risky behavior, varied on factor 1 'success vs. fail' and factor 2 'laughing vs. horror-sound'. Risk-taking intentions and risk perception of five domains of risks (social, recreational, financial, health-safety, ethical risks) and affect were measured after experimental manipulation. Results show that only risk-taking in the ethical domain was statistically significantly influenced by whether participants saw a risky behavior going wrong or going well. Risk Perception was not influenced by the videos in general. Positive or negative affect was not a mediator in the relationship between the media-content and risk-taking intentions and risk perception. However, examination of possible moderating variables revealed sensation seeking to moderate between factor 1 'success vs. injury' and ethical risk perception and also total risk perception. Likewise, locus of control was fully moderating the influence of factor 2 'laughing vs. horror-sound' on financial risk perception. Limitations and strengths of the study are discussed.

Every man has a right to risk his own life for the preservation of it. Jean-Jacques Rousseau

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Introduction

The literature on television and media-effects traditionally has focused on negative outcomes: for example, the perceived risk of people copy-catting violent behavior is a discussion since the invention of TV and constitutes a decade-long debate. Indeed, television-programs that depict risky, often questionable behavior such as *'Jackass'*, have been blamed for inspiring risky behavior which have led to several deaths and severe injuries: for example, one teacher died after copying a downhill-racing inside a shopping cart (Clarkson, 2003), another dead teenager being pulled in a shopping cart by a car and hitting a speed bump (Daily Mail Reporter, 2011), one dead adolescent being hurled 20meters from a merry-go-round after having attached a rope to it and getting accelerated by a car in the US (Kruger, 2005) as well as in Germany (Schäfer, 2012), one death after riding downhill on a friends' bike-handlebar (Daily Mail Reporter, 2006), one death of another boy jumping on the hood of a driving car (Iolnews, 2002), and other incidences involving severe burns after being poured with petrol and set on fire (Sharpe, 2012).

This study is a first step towards analyzing a specific type of media-content: amateurrecordings of more or less serious injuries and misfortunes (*'home videos'*), which are broadcasted on television and usually enriched with ridiculing comments and laughing-sounds.

We know that risk glorification in media-content is a causal determinant of unintentional injuries and deaths (Fischer et al., 2011) and risk-taking is seen as the main cause of unintentional injuries among humans (Harvey, Towner, Peden, Soori & Bartholomeos, 2009). Risk glorification is presenting risks on TV or video games in such a positive light, that it literally stimulates dangerous behavior. Since one of the most important findings in the literature concerning media-effects on humans is that *content matters* (Anderson & Dill, 2000; Fischer, Kastenmüller, Greitemeyer & Vogrinic, 2011), we are interested in the outcomes and effects of watching home videos. In particular, this study focuses on injuries and specifically those videos where there are two versions of the very same behavior.

In the psychological literature, the 'General Learning Model' [GLM] (<u>Buckley & Anderson, 2006</u>) describes media-effects on individuals' behavior as a learning-trial in terms of learned concepts, schemata and scripts. In essence, the GLM states that personal variables (attitudes, beliefs, previous experiences, emotions and behavioral tendencies) combine with situational variables (the media itself, e.g. interest and excitement generated, and the medium of the exposure, e.g. film, song, TV) to influence affect (mood, emotion, etc.) and arousal (excitement) and cognition (schemas, attitudes, etc.), which constitutes a person's 'present internal state'. The present internal state in turn influences people's appraisal and decision

processes, which subsequently result in some kind of action, which again make up the input of personal and situational variables in the future. This cyclical process is called a learning encounter and is said to eventually influence subsequent behavior both short-term and long-term, e.g. by priming and activating concepts which are then more likely to be used than other inactive concepts, and by providing cognitive scripts, which in turn guide human behavior.

In the past, many media-effects studies were carried out which compared media-stimuli that were poorly matched, as several authors noticed (see for example, Freedman, 2002; Savage, 2004; Greitemeyer, 2014). Due to differences on other important variables (e.g. excitement generated, arousal) such comparative studies are prone to lead to false conclusions, since the conditions and the stimulus-material are not matched well. In this study, to clearly rule out compounding variables embedded in the clip itself (such as gender, behavior, etc.), the stimuli is not just set on or off, but varied exclusively on two factors to be able to isolate the effect of that given factor separately. These two factors are the visual content on the one hand, and the audio on the other hand: what you see and what you hear.

As no study has ever analyzed the risk-psychological effects of vicariously observing people falling and getting hurt, while additionally hearing laughing-sounds and ridiculing comments, the following hypotheses can be indirectly deduced from the available literature.

We assume that media-effects could also have positive effects. It is conceivable that some types of media-stimuli could be a powerful deterrent of risky behavior, for example by depicting the consequences of some risk-taking. Home videos, as they have a wide audience-range and theoretically offer the opportunity to stop, rewind, and play again a particular scene or happening, could indeed have positive effects; although the clips are shown very briefly, and the next one follows immediately, the audience sees that a particular risky behavior 'did not go well'- which could alter their risk perception of the behavior in question, by showing what a possible threat is (seeing what could happen while using a trampoline, e.g. the trampoline-net tears apart, resulting in a fall from height), showing what precisely went wrong (the mistake made, e.g. jumping the trampoline-net with high heels), seeing what the consequences are (cry, injury or just nothing but laughter) and empathy-like letting people 'feel' the consequences (facial injury-expressions and injury-sounds such as breaking bones).

Indications that the depiction of positive versus negative consequences has contrasting effects on the perception of risk, is somehow common-sense but also only sparsely scientifically examined, especially with respect to research on media and risk perception of 'recreational leisure-time activities'. The research-studies conducted by Guter (2006) give good reason to assume that it makes a fundamental difference whether the consequences are depicted or not:

she conducted four studies and found *priming* to be the general, psychological mechanism. Her research will be reviewed, as her findings form the base of the present research and the theoretical substructure of the present research.

In study 1, merely *thinking about* situations and experiences where risky behavior led to positive consequences was sufficient to trigger a significant higher quantity of participation in a subsequent gamble-task. In study 2, seeing pictures of high-risk versus low-risk sports (compared to neutral sports) led to a higher cognitive accessibility of risk-positive concepts. Furthermore, participants had a more positive impression of a sport after reading about positive consequences thereof. Study 3 explored the mode of working of seeing risk-glorifying videosequences from James Bond and Jackass, either with or without a warning-label. As a behavioral outcome measure, the participants' behavior in a virtual racing-game was analyzed. Results underline the conclusion that risk-glorifying video-sequences increase risk-behavior, regardless of the warning-label which merely led to more arousal. In study 4, playing riskglorifying video-games, where risky behavior leads to success (racing-games) led to more readily available risk-positive cognitions, compared to video-games where risky behavior has no influence. Most interestingly, the author used two different games in the pro-risk condition, which itself had significant differences in the outcome-variables: in one game, the damage of car-parts is displayed and influences driving-performance, and in the other game, no signs of damage are apparent. It may be the case that depicting the negative consequences (the presentation of damage) raises the participants' awareness of threats.

These findings form the base of the research at hand and the theoretical substructure for the following hypothesis. Globally stated, a risk-positive depiction should lead to a lower risk perception than a risk-negative depiction of the same behavior.

With respect to the background sound, it was found that audience laughter is a source of information: A basic principle of social proof, encouraging people to conform to social pressure (Cialdini, 1993; Leventhal & Cupchik, 1975). Furthermore, audience laughter makes jokes funnier and increases the expression of mirth (Fuller & Sheehy-Skeffington, 1974; Nosanchuk & Lightstone, 1974; Smyth & Fuller, 1972). However, the effects of negative audience responses like hissing and 'booing' have been less investigated. But, as Grammer & Eibl-Eibesfeldt (1990) state, it is generally supposed that any influencing response would have a predictable effect on those witnessing that response.

Taken together, the background-sound as well as the humor used to enrich the riskbehaviors seen in home videos suggest yet another concept: the emotion of harm-joy (or 'schadenfreude'), which is defined as the malicious joy elicited by someone else's downfall, or the pleasure derived from another's misfortune (Van Dijk, Ouwerkerk, Goslinga, Nieweg, & Galucci, 2006). To our knowledge, only one single study exists investigating the consequences of schadenfreude in the domain of risk-psychology. Kramer, Yucel-Aybat and Lau-Gesk (2010) found that the experience of schadenfreude has a systematic impact on choice likelihood of safe over risky options. Participants were put randomly in one of two conditions; in the schadenfreude condition, they were asked to recall an event that made them feel happy when someone else did really badly at a task. In the happiness condition, they were asked to recall an event that made them feel happy when someone else who deserved it did really well at a particular task. Thereafter, they had to make a choice between products that varied in terms of potential risks and trade-offs. Results underline the so-called affect as information effect; the informational role of affect (here: schadenfreude) seems to increase risk-aversion following unfavorable outcome expectancies, i.e. heightens the participants' anticipation of own possible unfortunate outcomes.

With respect to other possible moderators, mediators, moderating mediators or mediating moderators, 'locus of control' and 'self-efficacy' have been numerously identified as having great influence on risk-taking and risk perception. Likewise, the literature on risk identified 'sensation-seeking' (besides demographical variable as age and gender) as a construct embedded biologically in the personalities of risk-takers. Besides sensation-seeking, one additional scale was developed measuring risk-personalities in terms of being more a risk-avoider or risk-seeker: Rohrmann (2004) constructed the 'Risk Orientation Questionnaire', which consists of 12 items, such as 'I follow the motto 'nothing ventured, nothing gained' or 'I tend to imagine the unfavorable outcomes of my actions'.



Putting it all in a nutshell, we propose the following hypotheses, which are visually summarized in figure 1.

Figure 1: Visualization of Hypotheses

- (H1a) Risk-Videos will predict Risk-Taking
- (H1b) Risk-Videos will predict Risk Perception
- (H2a) Affect will mediate the relationship between Risk-Taking and Risk-Videos
- (H2b) Affect will mediate the relationship between Risk Perception and Risk-Videos
- (H3a) Risk-Propensity, Sensation Seeking, Self-Efficacy and Locus of control will

moderate the relationship between Risk-Taking and Risk-Videos

(H3b) Risk-Propensity, Sensation Seeking, Self-Efficacy and Locus of control will moderate the relationship between Risk Perception and Risk-Videos

Method

Demographics. The sample was recruited by means of convenience sampling from the university participants pool. Students and friends were asked to participate in a study on television-preferences and compensation was given by means of study-credits. 239 subjects finally participated in this study, with 96 males and 143 females. Mean age was 22.99 years (SD=4.55). Number of participants per condition was N=43 for condition A, N=50 for condition B, N=52 for condition C, N=44 for condition D and N=51 for the control condition.

Design. To analyze the influence on the psychological perception of risk by observing injuries shown in such TV-programs, the current research employs a 2 'success / fail' (no-injury vs. injury) x 2 'positive / negative sound' (laughing-sounds vs. horror-sounds) as independent variables in a factorial, quantitative between-subjects experimental design. By this, mediacontent is varied in terms of what is seen and what is heard. What is to be seen is manipulated by showing the risky behavior, such as jumping over a table, resulting either in a fall (e.g. injury, hence a *fail*) or the very same behavior going perfectly well (no-injury, hence a *success*). Using audio-stimuli as the second factor, clips are varied in terms of what is heard in the background. Traditionally, home video clips are extended with ridiculing comments and canned laughter to make the material funnier. Therefore, the present research digitally also manipulates the background-sound by replacing the original laughter-sounds with a more horrifying, scary soundtrack.



Figure 2: Visualization of **Experimental Conditions**

Figure 2 visually summarizes the conditions and its varied factors. Five conditions were created, to which participants were randomly allocated to: in condition A, successful (no-injury) riskbehavior was shown while hearing positive (laughing) sounds, condition B saw successful (no-injury) risk-behavior while hearing negative (terrifying) sounds. Condition C, which is a neat representation of home video television-programs, saw failed risk-behavior (injurious) and heard positive (laughing) sounds. Consequently, condition D

watched failed risk-behavior (injurious) while hearing negative (terrifying) sounds. For the control group, no video-stimuli were provided.

Manipulation. The stimulus-material consisted of sequences collected from popular home video-programs such as 'America's funniest home videos', 'Ridiculousness' and 'Scarred'. The reason for the choice of these specific three TV-programs is their availability on internet; both programs are viewable on YouTube for free, which saves an enormous amount of time needed for collecting, recording, editing and uniting the particular stimulus sequences. The programs were downloaded and watched in order to identify suitable clips for this study, which were subsequently edited, manipulated and merged in a video editing software (Adobe PremierePro CS5).

Clips were identified as suitable when they showed at least two times the same risky behavior sequentially one by one. An example will illustrate this; in one clip, a boy jumps over a playground tool once and everything goes perfect (no fall, no injury), and the second time he jumps, he slips shortly before the jump and falls. This sequence would constitute one of the present study's stimulus-sequences and be divided into the four conditions: the first part of the sequence (where everything goes perfect) would be enriched with laughing-sounds to be included in condition A (no injury event, laughing-sound), and enriched with terrifying sounds to be included in condition B (no injury event, terrifying sound). The second part of the clip (which results in an injury) is used for condition C (injurious event, laughing-sound with a terrifying sound.

In total, 47 clips could be extracted, which show a risky behavior going well and exactly the very same risky behavior going wrong. The resulting inventory of the stimuli-clips was eventually randomized once to eliminate order-effects. A list of the clips and the accompanying specific risky behavior shown is included in the <u>Appendix</u>.

Procedure. This research was initially introduced as a study on television-preferences and perception. The study was approved by the ethical commission, and informed consent was obtained by every volunteer. At first, participants were asked to fill out questions on demographics and personality-factors, such as sensation seeking and self-efficacy. Thereafter, they were randomly allocated to one of the manipulated conditions or a control condition without any video-stimuli. Upon that, participants in the experimental conditions were asked to indicate their positive and negative affect as well as how funny they perceived the shown videos to be. At the end, the dependent variables of main interest, namely risk-taking intentions and risk perception were measured by having all participants indicate their own intentions and perception of five domains of risks (social, recreational, financial, health-safety and ethical risks).

Instruments. To confirm that the independent variable was in fact manipulated as intended, a manipulation-check was conducted. Specifically, we wanted to verify that the experimental conditions only differed on the mentioned two factors ('success vs. fail' and 'laughing vs. horror-sound'). Three items were deployed: 'the episodes ended with the main character getting injured' and 'the sounds were [funny] vs. [terrifying] ', measured on a 7-point Likert-scale (ranging from 1=absolutely disagree to 7=absolutely agree).

Risk-Taking and Risk Perception. To measure risk perception and risk-taking, the study at hand used the validated 'domain-specific risk-taking scale' (DOSPERT) by Blais and Weber (2006). The scale measured risk perception as well as risk-taking on five risk-categories of life: social risks (e.g. 'admitting your tastes are different from those of a friend'), recreational risks (e.g. 'going camping in the wilderness'), financial risks (e.g. 'betting a day's income at the horse races'), health-safety risks (e.g. 'engaging in unprotected sex') and ethical risks (e.g. 'having an affair with a married man/woman'). With respect to the concept of risk-taking, participants had to indicate on a 7-point Likert-scale ranging from 1 (*=extremely unlikely*) to 7 (*=extremely likely*) their likelihood of engaging in the described activities (N=30). Risk perception was measured by asking participants to indicate their perceived riskiness of the same activities. With respect to the internal consistency of the scales, Cronbach's Alphas were in an acceptable to good range (For risk-taking: social risks $\alpha=.71$; recreational risks $\alpha=.73$; recreational risks $\alpha=.71$; financial risks $\alpha=.73$; recreational risks $\alpha=.71$; financial risks $\alpha=.65$;

Affect. Positive as well as negative affect was measured with the 10-item short version of the 'Positive And Negative Affect Schedule' [PANAS] (Watson, Clark & Tellegen, 1988; Thompson, 2007). The scale comprised two affect scales, each measured with five items. Participants indicated to what extent they feel a specific affect in a specified time-frame, rated on a 5-point Likert-scale ranging from $1(=very \ slightly \ or \ not \ at \ all$) to 5(=extremely). Satisfying high Cronbach's Alpha coefficients and evidence of validity are reported for both scales (Watson et al., 1988). In this study, reliability-coefficients were likewise satisfying (Positive Affect α =.75; Negative Affect α =.76). Furthermore, we measured the perceived funniness of the videos by asking participants to indicate their agreement with three statements on a 7-point Likert-scale. The three items were 'I found the clips funny', 'I laughed at the clips' and 'I enjoyed the clips'. The reliability-coefficient was satisfying (α =.86).

Locus of Control. Locus of control was measured by Rotter's 'Locus of Control' scale (<u>Rotter, 1966</u>). The scale contained thirteen items in a forced-choice format. Example-items are 'Becoming a success is a matter of hard work, luck has little or nothing to do with it' for an

internal locus of control, and 'Many of the unhappy things in people's lives are partly due to bad luck' for external locus of control. A high score on the scale we used indicates a more internal locus of control, whereas a low score is an indication of an external locus of control.

Self-Efficacy. To measure perceived self-efficacy, we utilized the 'General Self-Efficacy Scale' by Schwarzer and Jerusalem (1995). Ten items were scored on a 4-point Likert-scale ranging from 1 (*=not at all true*) to 4 (*=exactly true*). Example items are 'It is easy for me to stick to my aims and accomplish my goals' and 'I can usually handle whatever comes my way'. Cronbach's Alpha was α =.83.

Risk-Propensity and Risk-Cautiousness. Rohrmann's Risk Orientation Questionnaire (ROQ) (Rohrmann, 2004) was utilized in order to measure risk-propensity and/or risk-cautiousness. Participants indicated their agreement with twelve statements expressing risk-cautiousness (i.e. 'I tend to imagine the unfavorable outcomes of my actions') or risk-propensity (i.e. 'Even when I know that my chances are limited I try my luck'. Points are scored on a 7-point Likert-scale ranging from 1 (=*No, not at all*) to 7 (=*Yes, very much so*). With respect to internal consistency, Cronbach's Alpha were in an acceptable range (Risk-Propensity α = .62; Risk-Cautiousness α = .67).

Sensation seeking. Sensation seeking is 'a trait defined by the seeking of varied, complex, & novel sensations & experiences & the willingness to take physical, social, legal, & financial risks for the sake of such experiences' (Zuckerman, 1994, p. 27). We utilized the 'Brief Sensation Seeking Scale' (Hoyle, Stephenson, Palmgreen, Lorch & Donohew, 2002), which is 8-item short version of the original scale. Respondents indicated their agreement on a 5-point Likert-scale ranging from 1(=*strongly disagree*) to 5(=*strongly agree*). Example-items are 'I like to do frightening things' and 'I get restless when I spend too much time at home'. Cronbach's Alpha was α =.74. Data on the internal consistencies are summarized in table 1.

Analysis. For each of the independent and dependent variables, sum-scores and/or mean-scores were computed as advised by the specific scoring-manual of the scale in question. For example, for the variable risk-propensity and risk-cautiousness, Rohrmann commends a summated rating score, by summing up each individual, dividing by the number of total-number of items, and subsequently multiplying it with ten. For the affect scale, individual item-scores are summed (<u>Watson, 1988</u>). For risk-taking measured by the DOSPERT, Blais and Weber recommend a typical mean-score for each of the risk-categories. However, since we are calculating analyses based on correlations, dividing an original score by a constant does not affect the correlation and regression coefficients.

With the obtained mean-scores of the variables, several 2x2 ANOVAs were planned for the ten variables of interest, namely risk-taking and risk perception of five domains of risks. The independent variables were the two experimentally manipulated factors 'success vs. fail' and 'laughing vs. horror-sound'. Main-effects and interaction-effects were sought.

For the analysis of possible mediators and moderators, multiple analyses of covariance and regression-analyses were planned. Specifically, a proposed variable would be a mediator, if analyses verified following conditions: in a first model, the regression-coefficient of X predicting Y is statistically significant. In the second model, the regression-coefficient of X predicting the mediator M is significant. In a third model, the proposed mediator M significantly predicts the dependent variable Y. Finally, if the influence of M on Y remains significant after controlling for X, we have some form of mediation: *full mediation* if X is not longer significant (when M is controlled) and *partial mediation* when X is still significant. Whether a variable acts as a moderator between an independent and dependent variable, the following conditions should be met: a model containing the factor and the proposed moderator should be statistically significant in predicting the outcome variable, and a second model with additionally the computed interaction between the factor and the centered moderator should be likewise significantly predicting the outcome. Moreover, the regression-coefficient of the interaction term should be significant.

Results

Table 1 (Appendix) shows all mean values for all measured variables for the different groups of participants. Although randomized allocation to conditions took place, multiple univariate analyses of variance were performed to rule out the possibility of confounding variables prior to experimental manipulation. No significant differences were found between the conditions, neither in gender (F(4,234)=1.15, p=.33), age ($F_{(4,234)}=1,22$, p=.30), nor in any of the independent variables, such as risk-propensity ($F_{(4,234)}=.87$, p=.48), risk-cautiousness ($F_{(4,234)}=.98$, p=.41), sensation seeking ($F_{(4,234)}=1.18$, p=.34), self-efficacy ($F_{(4,234)}=.44$, p=.77) or locus of control ($F_{(4,234)}=1.54$, p=.19). This serves as an indication that there were no differences prior to experimental manipulation, which could have influenced the results.

Manipulation-checks. Three items were used to verify the intended manipulation of the stimulus material. Several 2x2 ANOVAs were performed with the following results.

Item 1 asked whether the main persons involved in the videos were injured: the main effect of factor 'success vs. fail' on item 1 was significant ($M_{difference}=4.24$, SE=.19, $CI_{95}=3.86$

to 4.63, $F_{(1,184)}$ =478.29, p<.001, eta^2 =.72), such that videos showing risky behavior gone wrong were perceived as more injurious than videos showing the same risky behavior going well. Furthermore, the main effect of factor 'laughing vs. horror-sounds' was also significant ($M_{difference}$ =-.42, SE=.19, CI_{95} =-.81 to -.04, $F_{(1, 184)}$ =4.85, p=.02, eta^2 =.02), such that videos which had horror-sound in the background made the risky behavior seem more injurious than videos that had the laughing-sound. There was no significant interaction between factor 'success vs. fail' and 'laughing vs. horror-sounds' ($F_{(1,184)}$ =.23, p=.62).

Item 2 asked whether the background-sounds were funny: the main effect of factor 'laughing vs. horror-sounds' was significant ($M_{\text{difference}}$ =.98, SE=.25, p<.001, CI_{95} =.47 to 1.49, $F_{(1,184)}$ =14.40, p<.001, eta^2 =.072), such that videos with laughing-sounds running in the background were indeed also perceived as funnier. The main-effect of factor 'success vs. fail' was not significant ($M_{\text{difference}}$ =-.23, SE=.25, CI_{95} =-.74 to .27, $F_{(1,184)}$ =.80, p=.37, eta^2 <.01), and also the interaction-effect was not significant ($F_{(1,184)}$ =.58, p=.44).

Item 3 asked whether the background-sounds were terrifying: the main effect of factor 'laughing vs. horror-sounds' was significant ($M_{difference}=1.43$, SE=.28, p<.001, $CI_{95}=.88$ to 1.99, $F_{(1,184)}=26.15$, $eta^2=.124$), such that video containing the horror-sounds were indeed perceived as more terrifying. The main-effect of factor 'success vs. fail' was not significant ($M_{difference}=.19$, SE=.28, $CI_{95}=.35$ to .75, $F_{(1,184)}=.48$, p=.48, $eta^2<.01$), and also the interaction-effect was not significant ($F_{(1,184)}=.46$, p=.49). All in all, we can say that the manipulated video-material was perceived as intended and expected.

Hypothesis 1a (Risk-taking)

Table 2 (<u>Appendix</u>) summarizes the ANOVAs of the dependent variables by the two factors and interaction-effects for risk-taking and risk perception.

The five domains of risk-taking (social, recreational, financial, health-safety, ethical) were entered one by one as dependent variables in a 2x2 ANOVA, with factor 'success vs. fail' and 'laughing vs. horror-sounds' as well as the interaction of both as independent variables.

Results show no significant differences in the dependent variables, except for ethical risk-taking. On factor 'success vs. fail', there were differences between the groups $(M_{\text{success}}=2.80, SD=.98, M_{\text{fail}}=2.51, SD=.98, F_{(1,189)}=4.42, p=.03)$, such that whether the videos ended with the risky behavior going well or not made a difference on intentions of risk-taking in the ethical domain. Factor 'laughing vs. horror-sound' was not significant associated with any risk domain, neither was the interaction-term of both factors. Furthermore, a 2x2 ANOVA comparing the four experimental groups with the control group (which was not influenced by

audiovisual material a priori), the only significant difference found was in financial risk-taking $(M_{\text{Videos On}}=2.71, SD=1.15, M_{\text{Videos Off}/Control}=2.32, SD=1.03, F_{(1,240)}=4.85, p=.02).$

Hypothesis 1a, stating a direct influence of the videos on risk-taking intentions, could thusly only partially be confirmed: the groups that saw injuries had a lower risk-taking intention in the ethical domain, and the group without any videos had the lowest intention to take risks in the financial domain.

Hypothesis 1b (Risk perception)

Again, the five domains of risk perception (social, recreational, financial, health-safety, ethical) were entered sequentially as dependent variables in a 2x2 ANOVA, with factor 'success vs. fail' and 'laughing vs. horror-sounds' as well as the interaction of both as independent variables.

The ANOVAs showed in a comparison between the experimental conditions and the control group no significant differences between the groups. Furthermore, neither an ANOVA by the independent factor 'success vs. fail' (whether a risky behavior has ended injuriously or not), nor an ANOVA by factor 'laughing-sounds vs. horror-sounds' (whether the video-material contained laughing or horror-sounds running in the background) was statistically associated with any domain of risk perception. However, looking at the effects of the interaction-term, a statistically significant interaction-effect was found for financial risk perception ($M_{success+laughing}=5.06$, SD=1.11, $M_{success+horrorsound}=4.82$, SD=1.15, $M_{fail+laughing}=4.54$, SD=1.17, $M_{fail+horrorsound}=5.13$, SD=1, $F_{(1,189)}=6.57$, p=.01). That is, the effect of 'success vs. fail' on financial risk perception depends on whether there are laughing or horror-sounds played in the background.

Hypothesis 1b, stating a direct influence of the videos on risk perception, could thusly not be found in terms of main-effects of one or the other factor. However, an interaction-effect was found which will be interpreted in the discussion.

Hypothesis 2a & 2b (Affect as mediator)

Figure 3 (<u>Appendix</u>) shows a summary of the regression-coefficients of the three variables in question.

Positive affect. Compliant with the procedure of Baron and Kenny (<u>1986</u>), the hypothesis that positive affect mediates the relationship between factors and risk-taking and/or risk perception is tested. Figure 4 assists in understanding the various steps involved in mediator-analysis.



Figure 4: Schematic representation of mediation-analysis

Firstly, a regression analysis with factor 'fail vs. success' as predictor and each risk-taking domain as the dependent variable ('Path c') indicated a significant relation for ethical-risks only (β =-.287, *t*=-2.008, *p*=.046). As 'path c' was only significant for ethical risk-taking, any other mediator-analysis is superfluous due to the non-existing relation between the factors and the dependent variables (<u>Baron & Kenny, 1986</u>).

Regression-analysis of 'path a' shows that the factor 'fail vs. success' does not predict positive affect (β =-.807, *t*=-1.387, *p*=.167), neither does factor 'laughing vs. horror-sound (β =-.650, *t*=-1.114, *p*=.267). An analysis of the interaction-term shows the interaction to be not a significant predictor of positive affect (β =.751, *t*=-1.14, *p*=.25). All in all, the data indicates that the hypothesis of positive affect as a mediator between the two factors and risk-taking and risk perception is not supported by the data.

Negative affect. Compliant with the procedure of Baron and Kenny (<u>1986</u>), the hypothesis that negative affect mediates the relationship between the two factors and risk-taking and/or risk perception is tested. Specifically, ethical risk-taking was analyzed as it was the only significant one (*path c*: $\beta =$ -.287, *t*=-2.008, *p*=.046). Regression-analysis of 'path a' shows that factor 'fail vs. success' does predict negative affect (β =1.96, *t*=3.922, *p*<.001). Likewise, factor 'laughing vs. horror-sound' significantly predicts negative affect (β =-1.329, *t*=-2.601, *p*=.010). An analysis of the interaction-term shows that the interaction between the two factors does not predict negative affect (β =.562, *t*=.98, *p*=.32). This might indicate that negative affect does not play a role in mediating the effect between 'fail vs. success' and the influence on ethical risk-taking.

Funniness. Compliant with the procedure of Baron and Kenny (<u>1986</u>), the hypothesis that funniness mediates the relationship between the two factors and risk-taking and/or risk perception is tested. Specifically, ethical risk-taking was analyzed in detail, due to the significance of 'path c'. Regression-analysis of 'path a' shows that factor 'success vs. fail' does predict funniness (β =-.445, *t*=-2.111, *p*=.036). Factor sound does not predict funniness (β =.216, *t*=1.018, *p*=.310). An interaction between the two factors is not significant (β =.09, *t*=.38, *p*=.70). Moreover, regressing funniness on ethical risk-taking does not yield a significant association (β =.067, *t*=1.36, *p*=.174).

Therefore, mediating-analysis ends here. Hypotheses 2a and 2b, supposing a mediating role of affect in the relation between the videos and risk-taking as well as risk perception, could not be shown by the data.

Hypothesis 3a & 3b (Moderator analysis)

Figure 4 (<u>Appendix</u>) summarizes the findings concerning the moderating variables.

To check whether a variable acts as a moderator between an independent and dependent variable, the explained variance statistics were analyzed. An example will illustrate the specific steps of analyses: the variable sensation seeking was hypothesized to influence the relation between the video-stimulus and risk-taking intentions. In regression-terms, a model with either factor 'success vs. fail', 'laughing vs. horror-sound' or the interaction was entered as a predictive variable in a linear regression-model with recreational risk-taking as dependent variable, and for example, sensation seeking was entered as predictor in step 1. Thereafter, a new variable was made out of the interaction between the factor in question and the supposed, centered moderator. In step 2, this variable was entered stepwise. An indication of moderation was if the explained variance was larger in the second model. Furthermore, for full moderation both models as well as the interaction-term should be significant (Fairchild and MacKinnon, 2009).

Recall that the supposed moderators were age, sex, risk-propensity, risk-cautiousness, sensation seeking, self-efficacy and locus of control. The results show three instances of moderation: sensation seeking was a full moderator between the factor 'success vs. fail' and recreational risk perception. Here, model 1 was significant (R=.33, R^2 =.11, $F_{(1,189)}$ =11.75, p<.001), model 2 was also significant (R=.37, R^2 =.13, $F_{(1,189)}$ =9.94, p=<.001). Likewise, the interaction-term was a statistically significant predictor (β =.15, t=2.39, p<.01). Furthermore, sensation seeking moderated the influence of the factor 'success vs. fail' in total risk perception. Here, model 1 was significant (R=.23, R^2 =.05, $F_{(1,189)}$ =5.48, p=.005), model 2 was also significant (R=.29, R^2 =.08, $F_{(1,189)}$ =5.78, p=.001). Likewise, the interaction-term was a statistically significant predictor (β =.11, t=2.46, p=.01)

Another moderating variable was locus of control. Locus of control was fully moderating the association between factor 'laughing vs. horror-sound' and financial risk perception. Model 1 was significant (R=.22, R^2 =.05, $F_{(1,189)}$ =4.86, p=.009), model 2 was also significant (R=.27, R^2 =.07, $F_{(1,189)}$ =5.02, p=.002). Likewise, the interaction-term was a statistically significant predictor (B=-.18, t=-2.26, p=.02).

Thus, hypotheses 3a and 3b could partly be confirmed by the data. Sensation seeking moderated the influence of factor 'success vs. fail' on recreational risk perception and total risk perception. When injuries were shown, participants had the same perception of risks in the recreational domain and in total, but when risky stunts were shown that went well, a significant difference between high-sensation seekers and low-sensation seekers was found: people high on sensation seeking have a much smaller risk perception of recreational risks and in total.

Furthermore, locus of control fully moderated the association between factor 'laughing vs. horror-sound' and financial risk perception. When horror-sounds were played in the background, participants had quite the same risk perception in the financial domain. However, when there were laughing sounds, participants with a more external locus of control (believing in faith, external forces, etc.) have a higher financial risk perception.

Discussion

This study was a first attempt to analyze the influence of television-programs depicting various injuries and mishappenings paired with faked audience-laughter running in the background, such as 'Americas finest home videos'. The primary interest was the home videos' influence on thoughts about risks, specifically risk-taking intentions and risk perception of various domains of risks. Therefore, we manipulated the videos on two main factors: the visual and the audio component, what we thusly see (a risky behavior going either wrong or well) and what we hear (laughing or horror-sound). The secondary focus was on uncovering possible mediators and moderators in the relationship between the various manipulated versions of the home videos and risk-taking/risk perception.

We expected an increase in risk-taking intentions when videos showed a risky behavior going well, as suggested by the literature on risk-glorification in media (Guter, 2006). We also expected an increase in risk perception where the risky behavior led to more or less serious injuries. With respect to possible mediating and moderating variables, we hypothesized risk-positive attitudes and/or risk-personalities (i.e. sensation-seekers) to be influenced to a different degree, compared to risk-cautious participants (Zuckermann, 1979). Furthermore, a positive or negative affect created by the videos was supposed to be mediating the relationship between media-influence and behavior and/or cognitions (Finucane, Alhakami, Slovic & Johnson, 2000).

First of all, the video-stimuli and their manipulation were perceived as expected and intended. Videos were perceived more injurious where the risky behavior went wrong, they were perceived as funnier when laughing-sounds were running in the background, and more terrifying when there were horror-sounds.

With respect to our hypotheses, we could not find a general influence of the videos on all domains of risk. Comparing the four experimentally manipulated groups with the control group, we found differences in their risk-taking intentions in the financial sector, that is, the control group had a lower intention to take financial risks. Moreover, when we compare the four experimental groups with each other, whether participants saw an injury or not made a fundamental difference to their own intentions to take risks in the ethical domain. That is, participants that saw an injury were less willing to take ethical risks, such as not returning a found wallet that contained 200 \notin (item #30 of the DOSPERT-scale), or revealing a friend's secret to someone else (item #16).

With respect to risk perception, a main-effect of the videos was not supported by the data. What we thusly think about the dangers of some behavior is not that easily to manipulate in general. However, an interaction-effect was found for financial risk perception. Specifically, the specific combination of risky behavior going wrong paired with horror-sounds in the background made the participants well aware of the dangers of financial risks.

However, the exploration of possible mediators and moderators is reduced and complicated since a general direct effect of the videos on risk-taking and perception was found only for some domains of risks, and not specifically for recreational risks which has been the domain of most interest for this study. A mediating role of affect generated by the videos was not supported by the data. With respect to moderating variables, comparing the conditions that saw the risky behavior going wrong versus going well, participants high in sensation seeking had a generally lower risk perception of recreational risks, as well as in total risk perception, compared to those low in sensation seeking. When we compared the groups that heard laughingsounds versus the horror-sounds, we found that people with internal and external locus of control have the same risk perception in the financial domain when horror-sounds were played in the background. Interestingly, when there were laughing-sounds, people with an external locus of control had a much higher perception of financial risks.

Before considering the methodological limitations of the study, we want to underline the strengths of the current research. First of all, by means of several pilot-studies (<u>Appendix</u>) we did real *ground work* to explore the stimuli, because no study existed on the topic of fail-videos. Tri-angulation was utilized by firstly analyzing the content and also the question how people react to home videos in a more natural setting. Additionally to increase reliability, results were verified and replicated (Study 1b and 2b).

Furthermore, we carefully matched our stimuli for the research at hand. In other studies, typically little time is spent on analyzing the content and stimulus-material used for researchpurposes. For example, when researchers are studying the influence of video-games of aggression, typically a supposed 'brutal' game is compared to another non-brutal. If results show significant differences on some variables, the reason is typically attributed to the different games although the games itself differ on many other variables besides brutality. In our research, the only difference between the stimuli for the different conditions were the two factors that were manipulated by us. More than 40 hours of watching home videos were needed to get suited clips that showed a risky behavior in two different versions: a stunt going wrong, and the very same stunt going well. Having the same stimulus varied only in terms of going wrong versus going well and having background-laughter versus a more terrifying sound was a first step towards a methodology in media-effects research, where stimuli chosen for comparative research are carefully considered and matched.

However, a study always has some limitations. Possible explanations for the acquired results are categorized into three main points: the stimulus, the research-method, and the theory as well.

Stimuli

Material. First of all, the material used as stimuli or the manipulation thereof could have been of greater importance than anticipated. We decided to use original video-clips that were also aired on television, however, they were taken from three different television-programs, with each another scope; some clips were from 'America's finest home videos' and some from 'Ridiculousness' or from 'Scarred'. The last one is different from the former two, since its focus lies on the depiction of consequences of a risky behavior, such as hospital-documentary, x-rays and the story as well as the person behind the injury. We did cut out everything else besides the injurious happening, however, it is possible that these clips were generally more horrifying compared to 'normal' home videos, which subsequently could have influenced the funniness thereof as well as other (un-)measured variables.

Manipulation. The manipulation of the clips, or in other words the creation of the different versions could have influenced the results; enriching well-performed risky stunts with laughter seems awkward if not arbitrary. Rather, well-performed stunts should probably be mixed with applause instead of laughter to have a risk-glorifying effect, as suggested by the media risk glorification literature (e.g. <u>Guter, 2006</u>). Worth a discussion is also the usage of the horrifying sound for the opposite of laughter; according to the results, it is questionable whether the horror-sound actually had an opposing effect. This was only true for financial risk perception.

Dosis and Content. Furthermore, the order and specific sequence of the clips we used was arbitrary and random, and not incremental as in real home video-programs. Normally, such programs start with funny animals or cute babies doing cute things, for example. We did only show home videos of one specific category, namely more or less serious injuries. Some clips depicted young people breaking their arm or twisting their knee: from discussions with participants we discovered that such a seriousness spoils fun, which could have been another reason why we did not find the hypothesized effects.

Moreover, participants had to view clips which had a length of approximately three minutes, compared to forty-five minutes in real home video-programs. All in all one could say that our clips were not a perfect representation of such a television-program, particularly because we omitted many categories of clips. Being parsimoniously, the clips contained no babies, no funny children, and no animals, among others. Furthermore, the verbal and sometimes ridiculing comments usually added to the clips were taken over from the 'original' television-program and did not have a common narrator, as usual in such programs. It is possible that these comments are a major source of funniness and therefore more important than initially anticipated.

Research-design

Participants. Participants were all but one student, and their level of education is not a flawless representation of the population in general. Possibly, this could have influenced the perception of the videos and hence the results. Combined with the Hawthorne-effect, knowing one is being analyzed and accordingly changing one's behavior, could have influenced the participants in way that a media-influence is actually suppressed, for example. Moreover, we suppose that research on the influence of media has likely to deal with social-psychological phenomena, such as social-pressure, peer-influence and group-dynamics: a horde of teenagers is likely to be more easily influenced by media depicting recklessness, compared to a student on his own. We had only very few young people in puberty. It is supposed that people in this age-group are more susceptible for risk-taking, according to the literature on the age-curve in risk-taking (Steinberg, 2004), where risk-taking is reduced with the progression towards adolescents, compared to puberty with its zenith of risky behavior.

Situation. The situation of watching the video clips was possibly inherently different from the situation in a living-room in front of the television, although we attached great importance to resemble a natural viewing-experience, e.g. by allowing participants to watch the videos online wherever they chose to, instead of a sterile laboratory. Moreover, we did not reveal the true purpose of this study and told participants the study's aim was about televisionpreferences and not about schadenfreude and injuries. Compared to lying on the sofa together with the family or friends while watching home video-programs, it is assumable that the research-situation facilitated the suppression of social-inappropriate behavior and emotions, such as laughing at someone's injury or mishappening. Methods and variables. In order to shed light on the influence of such videos, we decided to utilize a quantitative research-methodology, meaning that participants put check-marks on scales so that we are able to measure a possible influence. It is questionable whether a true behavioral influence is measurable on a Likert-scale, or whether it had been a better methodology to utilize a qualitative method. For example, a study where participants at first answer questions to a seemingly trivial research-topic, and after the pretended end of the study, participants encounter a more or less risky situation while their behavior is measured, coded and analyzed. Instead, we used a method which could be carried out online, with validated scales to measure risk-taking and risk perception with hypothetical scenarios as items. The dependent variables were diverse in their described scenarios: whether financial risks such as investing one's income in a dubious stock, or social risks such as the expression of an unpleasant opinion, or ethical risks such as cheating on one's spouse, it is conceivable that participants were primed to the true aim of the study. Moreover, the very low funniness ratings raise our suspicion that the research-situation in particular inhibited participants from really laughing at the videos.

Theory

Theory. What does this study add to the knowledge on media-influence in the risk domain? Our intention was to contribute to the concept of 'risk glorification' and trying to shed some light on the question what actually constitutes a glorifying media-content. What are the parts needed to be 'glorifying' risks? Does it suffice to just show a risky behavior going well? According to Guter (2006) and Fischer et al. (2011), risk-glorification in media increases risktaking and decreases risk perception. We could not find such effects. Maybe essential parts were missing, such as breathtaking pictures, high-quality recordings delivering a special atmosphere combined with well-chosen music. Essentially however, we did not only want to replicate research on risk-glorification and find possible mechanisms, but also, we asked whether there is a concept like risk horrification, something that could prevent people from copycatting seemingly (stupid) risky behavior. Such an approach could theoretically have beneficial effects in prevention efforts. Unfortunately, the role of humor and its effects on risk perception is a rather understudied topic in risk-psychology. Only a handful of studies exist, which implicate the following beneficial effects: positive appeals reduce counter-arguing (Moyer-Guse, Mahood & Brookes, 2011), are more persuasive (Lewis, Watson, White & Tay, 2007) albeit for men (Conway & Dube, 2002), lead to greater receptiveness (Reeves, Newhagen, Maibach, Basil & Kruz, 1991), overcome defensive reactions as selective perception and retention (Monahan, 1995; Madden & Weinberger, 1982), are more interesting and better able to provide positive role models (<u>Elliot, 1993</u>; <u>Flora & Maibach, 1990</u>), less likely to be ignored or rejected or leading to a third-person effect (<u>Elliot, 1993</u>; <u>Flora & Maibach, 1990</u>; <u>Lewis et al., 2007</u>), better able to grab initial attention, (<u>Madden & Weinberger, 1982</u>; <u>Monahan 1995</u>; <u>Nabi, 2002</u>), because the intended outcome and recommended response is not obvious for rebellious people (<u>Lee & Ferguson, 2002</u>). Besides positive effects, negative effects were also found: humorous appeals bring reduced processing, or denial when considered irrelevant or inappropriate, are less memorable (<u>Lewis, Watson & White, 2013</u>; <u>Henley & Donovan, 2002</u>; <u>Lewis et al., 2007</u>; <u>Rossiter, Donovan & Jones, 2000</u>), and trivialization of the threat (<u>Moyer-Guse, Mahood & Brookes, 2011</u>).

On the other hand, one could argue whether the attention-span is sufficient to learn from home videos. Home video-programs typically air some 500 clips in one broadcast. From an information-processing perspective, it is questionable whether it is possible to allocate sufficient attention to every scene shown and clearly identify the mistake, which is necessary to *learn* from the videos. In addition to this, *threat* is a subjective perception. The identification of the mistakes (an accident's *cause*) that led to the injuries shown in our study is not always possible. In any case, no matter how dangerous the actually broadcasted scene, there is always laughter following the more or less serious injury, which is very typical for this type of television-programs and probably the most entertaining part of such shows. As a consequence, it is to doubt whether the seriousness of (some) dangerous behavior is really interpreted as 'serious' when everybody around us (the 'social proof', conf. Cialdini, 1993) just bursts out in laughter, which is typically primed, modeled and suggested by artificially integrating fakelaughter from faked audiences at specific points into the sequences.

More research is needed to clarify how a positive, humorous appeal can be combined with audiovisual material in injury prevention-efforts.

Conclusion

The world around us is full of positive risk-glorifications, as passed on in proverbs such as 'no risk no fun', 'no pain no gain' and 'nothing ventured nothing gained', among many other sayings. Humanity would not have gone this far without having taken risks from time to time. Risk-taking played a major role in the survival of the fittest and natural selection (<u>Steinberg & Belsky, 1996</u>). Essentially however, there are only two ways to die; either by a medical disease (i.e. cancer, heart diseases) or by an injury. Unintentional injuries (i.e. unintentional falls and strucks) are the number one cause of deaths in children and adults up to 44 years (<u>Center for</u>

Disease Control and Prevention, 2010). Risk-taking is seen as the main cause of unintentional injuries among humans (Harvey, Towner, Peden, Soori & Bartholomeos, 2009), indisputably evident in traffic accidents involving speeding, alcohol and refusal of seat-belts (Harvey et al., 2009), health-related issues as having unsafe sex (Weinstock, Berman & Cates, 2004), extreme-sports (Young, 2002), binge-drinking and smoking (Glaeske, Schicktanz & Jahnsen, 2009). The assumption that media influence people is controversial yet scientifically proven and demonstrated numerous times (Anderson & Dill, 2000; Anderson & Buckley, 2006; Fischer et al., 2011). Putting it all in a nutshell, our research and the data leads to the conclusion that a three-minute enduring video is not sufficient to produce a significant influence in risk-taking and risk perception on quantitative scales, since the factors had no predictive value.

More research is needed in order to answer the question whether injury-videos can sensitize us. There is a possibility to benefit from vicarious learning, since home videos or failvideos on YouTube have a huge audience-range.

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Table1:

| Scales | Cron- | N of | Mean _A | Mean _B | Mean | Mean | Mean | Mean |
|--------------------------|--------|-------|--------------------|--------------------|----------------|-----------------|-----------------|---------------------|
| | bach's | items | (SD _A) | (SD _B) | c (SDc) | D(SDD) | control | mean |
| | α | | | | | | (SD | (SD _{SD}) |
| | | | | | | | control) | |
| Social Risk-Taking | .710 | 6 | 5,18 | 4,86 | 5,12 | 5,02 | 5,05 | 5,05 |
| | | | (0,90) | (0,98) | (0,84) | (0 <i>,</i> 93) | (0 <i>,</i> 87) | (0,90) |
| Recreational Risk-Tak. | .778 | 6 | 4,17 | 3,74 | 3,94 | 4,14 | 4,16 | 4,02 |
| | | | (1,44) | (1,30) | (1,41) | (1,36) | (1,16) | (1,33) |
| Financial Risk-Taking | .813 | 6 | 2,78 | 2,71 | 2,80 | 2,53 | 2,32 | 2,62 |
| | | | (1,21) | (1,19) | (1,16) | (1,02) | (1,03) | (1,13) |
| Health-Safety Risk-Tak. | .592 | 6 | 3,60 | 3,57 | 3,32 | 3,37 | 3,22 | 3,41 |
| | | | (1,09) | (1,07) | (0,94) | (1,00) | (0,94) | (1,01) |
| Ethical Risk-Taking | .669 | 6 | 2,79 | 2,81 | 2,67 | 2,32 | 2,57 | 2,64 |
| | | | (1,01) | (0,96) | (1,02) | (0,91) | (0 <i>,</i> 78) | (0,95) |
| Total Risk-Taking | .840 | 30 | 3,70 | 3,54 | 3,57 | 3,47 | 3,46 | 3,55 |
| | | _ | (0,78) | (0,73) | (0,67) | (0,73) | (0,58) | (0,70) |
| Social Risk Perception | .732 | 6 | 2,71 | 2,88 | 2,82 | 3,03 | 2,97 | 2,88 |
| | 74.0 | c | (0,82) | (0,97) | (0,77) | (0,94) | (0,83) | (0,87) |
| Recreational Risk Perc. | ./18 | 6 | 3,92 | 4,03 | 3,97 | 4,07 | 3,90 | 3,98 |
| | 0.45 | c | (0,98) | (1,10) | (0,84) | (0,89) | (1,07) | (0,97) |
| Financial Risk Percept. | .845 | 6 | 5,06 | 4,82 | 4,54 | 5,13 | 4,95 | 4,89 |
| | 745 | C | (1,11) | (1,15) | (1,17) | (1,00) | (1,30) | (1,16) |
| Health-Safety Risk P. | ./15 | 6 | 4,60 | 4,49 | 4,80 | 4,71 | 4,93 | 4,71 |
| Fabinal Diele Devenation | 652 | C | (0,89) | (0,95) | (0,98) | (0,97) | (0,96) | (0,96) |
| Ethical Risk Perception | .653 | 6 | 4,13 | 4,09 | 4,14 | 4,30 | 4,33 | 4,20 |
| Total Dick Devecation | 057 | 20 | (0,94) | (0,90) | (0,94) | (1,10) | (0,80) | (0,93) |
| Total Risk Perception | .857 | 30 | 4,09 | | 4,05 | 4,25 | 4,21 (0.57) | 4,13 |
| Docitivo Affact | 764 | E | 10,09) | (0,74) | (0,59) | 10.20 | (U,57) 12 E6 | (0,00) |
| Positive Affect | .704 | 5 | (2 0 2) | 11,24 | 9,00 (2,12) | (2 02) | (2 70) | (4, 14) |
| Nogativo Affact | 752 | 5 | (3,92) | (4,04) Q 12 | 0.00 | 10.20 | (3,70) | (4,14) 8 2 2 2 |
| Negative Affect | .755 | 5 | (2 01) | (3 66) | (3.25) | (4 12) | 7,35 (7 77) | (3 11) |
| Funniness | 860 | 3 | 3.04 | 3,00 | 2 95 | 2 3 3 | (2,77) n a | 2.88 |
| Turrinic 35 | .000 | 5 | $(1 \ A1)$ | (1 39) | (1 52) | (1 39) | (n a) | (1.46) |
| Locus of Control | na | 13 | 5 79 | 6 38 | 6 50 | 6 20 | 5 74 | 6 13 |
| | 11.0. | 13 | (2.09) | (1.89) | (1.87) | (2.01) | (1.85) | (1.95) |
| Self-Efficacy | .835 | 10 | 30.55 | 30.46 | 30.46 | 29.88 | 29.74 | 30.22 |
| | | | (4.09) | (4.20) | (4.28) | (4.19) | (3.89) | (4.11) |
| Risk-Propensity | .620 | 6 | 48.02 | 48.00 | 48.58 | 45.83 | 47.38 | 47.60 |
| | | - | (6.90) | (6.79) | (7.78) | (9.03) | (7.22) | (7.56) |
| Risk-Cautiousness | .670 | 6 | 38,41 | 39,06 | 41,34 | 40,18 | 40,45 | 39,94 |
| | | | (8,61) | (9,07) | (9,22) | (7,90) | (7,24) | (8,44) |
| Sensation-Seeking | .743 | 8 | 3,46 | 3,42 | 3,23 | 3,43 | 3,48 | 3,40 |
| | | | (0,59) | (0,72) | (0,69) | (0,73) | (0,61) | (0,67) |
| | | | | | | | | |
| | | | | | | | | |

Table showing data on internal consistencies and all means* with standard-deviation per measured scale * Mean_A;SD_A = Mean value of Condition A for the specific scale ; Mean_{all}: Mean value across all participants.

Table 2:

| Factor | ANOVA (control | | factor1 's | 2x2 ANC | ANOVA by interaction | | | |
|------------------------|----------------|------|---------------------------------|---------|----------------------|---------|------|-----------------------|
| | condition | ns) | factor2 'laughing vs. horror-sc | | | ound´ | | |
| | E | n | F1 | | | F2 | F2 | |
| Social Risk-Taking | 00 | 96 | 1/ | 70 | 2 56 | μ 11 | 70 | <i>p</i> <u>10</u> |
| Social Misk-Taking | .00 | .50 | .14 | .70 | 2.50 | .11 | .70 | .40 |
| Recreational Risk-Tak. | .64 | .42 | .17 | .67 | .32 | .57 | 2.41 | .12 |
| Financial Risk-Taking | 4.85 | .02* | .22 | .63 | 1.10 | .29 | .35 | .55 |
| Health-Safety Risk-T. | 2.18 | .14 | 2.53 | .11 | .00 | .94 | .07 | .78 |
| Ethical Risk-Taking | .33 | .56 | 4.42 | .03* | 1.31 | .25 | 1.76 | .18 |
| Total Risk-Taking | .95 | .33 | .82 | .36 | 1.53 | .21 | .10 | .74 |
| Social Risk Perception | .62 | .43 | .97 | .32 | 2.17 | .14 | .02 | .87 |
| Recreational Risk P. | .40 | .52 | .09 | .75 | .57 | .45 | .00 | .97 |
| Financial Risk P. | .18 | .66 | .44 | .50 | 1.11 | .29 | 6.57 | .01* |
| Health-Safety Risk P. | 3.28 | .07 | 2.21 | .13 | .51 | .47 | .00 | .93 |
| Ethical Risk Percept. | 1.26 | .26 | .64 | .42 | .18 | .67 | .48 | .48 |
| Total Risk Perception | 1.04 | .30 | .59 | .44 | .73 | .39 | 1.19 | .27 |
| Funniness | n.a. | n.a. | 4.92 | .02* | 1.39 | .24 | 3.18 | .07 |
| Positive Affect | 25.38 | .00* | 1.69 | .19 | 1.02 | .31 | .21 | .64 |
| Negative Affect | 5.24 | .02* | 17.86 | .00* | 9.28 | .01* | .35 | .55 |
| Funniness | n.a. | n.a. | 4.92 | .02* | 1.39 | .24 | 3.18 | .07 |
| | | | | | | | | |

Table showing the F- and p-values from an ANOVA of the main-factors and their interaction, per risk domain. * Significant at 0.05





Figure 4: Moderating Variables







Pilot Study 1a

Research-Question: What is actually shown in these kinds of home-video shows? Is it possible to derive at universal categories of the shown clips?

Objectives: To identify key themes in the area of interest, an inductive content-analysis was conducted. By reducing the material to a set of categories (Elo & Kyngäs, 2007), it provides an overview of the actual stimuli-content of home-video programs and the way they are presented and broadcasted on TV.

Method: 40 hours of home video-shows, specifically 'Americas Finest Home Videos', 'Ridiculousness' and 'Scarred', which are freely available via YouTube, were watched while the first step was to label the clips using keywords and categorizing them afterwards into global categories; for example, a sequence showing a recovery-vehicle towing another car in the canyons when suddenly the recovery-vehicle itself thunders down would be tagged with 'work', 'occupational incidence' and 'car' and categorized into 'work sphere'. Another example is a sequence showing a dog trying to catch his own tail, which would be tagged with 'animal' and simply categorized into the category of 'animals'. Subsequently, the author performed a penand-paper factor-analysis and proximity-matrix manually, where similar items within a common category are nearer to each other (animal incidences) than dissimilar categories (working incidences and animal incidences).

Results: Common categories shown in home video-programs were extracted and will be elaborated on in the following;

- 1. Animals. Videos that were classified in this category usually showed various animals behaving in a more or less funny or dangerous manner. Some just did funny things such as catching its own tail, some did astounding things such as a squirrel running on his hands and handstanding, and some behaved in an aggressive manner, for example a monkey pulling a visitor's hair out.
- 2. Babies and Kids. Videos that were grouped in this category usually showed almost exclusively funny and sweet laughter and behavior of children.
- 3. Pranks. In this category, clips depict a staged situation, in which someone scares another person for the sake of it.
- 4. Injuries. This is the most prevalent category, and involves all kinds of more or less accidental injuries, including 'work-related accidents' such as accidents while tree-sawing and standing on a ladder. 'Sports-related accidents' were depicted by showing incidents ranging from professional auto-motor sports, winter-sports and more or less professional fitness-incidents up to 'recreational sports and hobbies'.

Furthermore, 'fire-related incidences' showed sequences ranging from accidentally burning hair, purposeful recklessness up to hardly comprehensible behavior, such as drinking burning alcohol.

Conclusion: The content-analysis made clear that home video-programs are overfilled with sequences from various categories and these categories are permeable, for example animals in the sports-category. However, the lowest common denominator to be seen in the content is a division between clips that show solely more or less funny situations (baby-laughter, funny animal-behavior, etc.) and those that depict more or less serious risk-taking behavior (jumping from roofs, sliding hills, skateboarding, etc.). The former has typically absolutely no aspect of risk in the widest sense, whereas the latter typically shows more or less serious accidents and failures, enriched with faked background-laughter and ridiculing comments.

Pilot Study 1b

Research-Question: How universal are the content-categories?

Objectives: To provide further evidence to the generalizability of the results found in Study 1a. Specifically, the study's objectives are to verify/falsify the categories of content found in Study 1a in order to increase reliability and validity.

Method: The method of 'think-aloud' (van Someren, Barnard & Sandberg, 1994) was used. Two participants were required to watch a randomly compiled sequence of clips (N= 107) and simultaneously describe in some words the actual content. For example, in the first clip which showed two babies in a bath-tube that were playing with foam, the two participants said 'baby sweet' and respectively 'baby funny'. In another clip depicting a teenager setting his face on fire willingly after having sprayed deodorant on it, the two participants said 'fire stupid' and respectively 'fire dangerous'. The participants' utterances were voice-recorded and subsequently analyzed and categorized.

Results: Results showed that the four categories of animals, babies, pranks and injuries are indeed salient. Those are the general, superordinate categories and each single clip shown in home-video programs can be categorized into one of these categories. In the 'animals' category, animals behaved in a funny/unfunny way, e.g. human-like, intelligent, naughty and/or stupid. Likewise, animals were depicted that behaved merely sweet or disgusting. Furthermore, the participants noted that some animals showed some risky or at least potentially dangerous behavior, such as a horse running seemingly blind into another horse. Likewise, the 'babies/kids' section includes funny babies, sweet babies, and again some risky-behaving

babies, such as a little child climbing out of his latticed bedstep. The 'pranks' category included people purposely frighten other persons, playing tricks or throwing a pie in the face of another person. The category of 'injuries' showed all kinds of incidences in which something happened to someone, ranging from merely silly coincidences, such as a chair breaking and the person falling on the ground, relatively small-risk behaviors such as running on wet grass up to high-risk behaviors, for instance being pulled by a car and hitting a lantern.

Conclusion: The categories found are generally perceived in a universal manner, although at times described in synonyms (e.g. 'burn' instead of 'fire'). Likewise, the permeability between the categories varies; one good example of blurred boarders between categories is a coincidental clash (injury) between a jogging boy and a dog (animal) running after a frisbee (sports) at the beach (recreation). However, the name 'injuries' for a category is partly misleading in the sense that the word 'injury' implies that someone really got hurt in the clip; this is not necessarily true. Given the short duration of the clips, the consequences were predominantly not visible: sometimes, one saw the victim laughing after falling, which appeared to study-participants that the victim is seemingly not really injured, and sometimes one saw the victim crying, which seemed as a cue that he/she obviously got injured. Frequently however, what happened after the injury is cut and left out by the editors of home video-programs, and the interpretation of the severity of the injury is left over for imagination by the viewer.

Pilot Study 2a

Research-Question: How do people react to those kinds of shows? What do they think about it? Is it possible to categorize the thoughts on dimensions?

Objectives: To explore viewer's experience of watching home videos, a qualitative method was chosen in which participants are free to say whatever they think about a given stimulus.

Method: A focus-group session (<u>Kitzinger, 1995</u>) was conducted. Focus-groups are group discussions organized to explore people's views on issues of interest. It required five subjects (mean age 24 years) to watch one hour of home-video-sequences and the subject's reactions to the stimuli were simultaneously (covertly) observed. A group room resembling a living room consisting of typical furniture (two sofas and chairs, table etc.) was chosen to imitate a typical viewing-experience. A beamer displayed the sequences on a whiteboard of 1,50m height and 3m length. The author's role comprised observing the subjects' reactions, specifically their verbal expressions, such as comments. Moreover, nonverbal expressions, such

as laughter, facial expressions and signs of empathy were observed. After asking general questions concerning the viewing experience, the author's main role was to stimulate discussion among subjects, if necessary. Furthermore, by mentally categorizing the comments, verbal and nonverbal reactions, common categories are extracted.

Results: Essentially, the participants' reactions while watching home videos can be classified on four major dimensions ('cognitions', i.e. attributions);

- Perception of Severity. This dimension ranges from 'not injurious/not severe at all' to 'severe and potentially deadly'. Common reactions for severity where verbal statements as 'nothing happened fortunately' and 'small scratch at very most' (i.e. low severity) and 'holy, that must have hurt' and 'this guy broke his neck' (i.e. high severity).
- Perception of Blamability. On a dimension from 'accidental coincidence' to 'fully own guilt and liability', common reactions entailed comments as 'bad luck', 'not his fault', 'what a coincidence' (i.e. low blamability) and 'what an idiot', 'he could have known that in advance' (i.e. high blamability).
- 3. Joy. This dimension ranges from 'unfunny' to 'funny' and is expressed by the amount of laughter.
- 4. Perception of Riskiness. This dimension ranges from behaviors not initially and saliently associated as risky, such as going upstairs, up to staged and obviously dangerous stunts, such as jumping from roofs. The perception of riskiness was more indirectly stated by statements such as 'that's what you get when you try such dangerous things' or 'jumping from roofs is suicidal'.

Conclusion: Results underline the diversity of clips and the accompanying difficulties for risk-psychological analysis; on the one hand, subjects highlighted the high amount of various risk-domains, ranging from 'everyday-incidences' such as bumping ones head on a cabinet door, 'extreme-sports'-incidences, such as riding motocross downhill, to 'silly coincidences', such as walking over the promenade when suddenly an aggressive bird appears. On the other hand, subjects complained that home video-programs do not portray a 'balanced' view of the risks, but exclusively videos in which the behavior or the stunt goes wrong. According to the subjects, an exclusively negative portrayal of risks distorts that some risks can indeed go well; taking risks can also be a worth and valued positive experience without any injury. This has been especially apparent for the two subjects that have been fairly professional skateboarders in their youth. This is an interesting point, as it suggests that having expertise in

one risk-domain such as skateboarding influences the way skateboard-related home videos are perceived.

Pilot Study 2b

Research-Question: How universally are the dimensions perceived?

Objectives: To replicate and verify the four dimensions found in Study 2a.

Method: Two participants were required to 'think-aloud' their thoughts (see <u>van</u> <u>Someren, Barnard & Sandberg, 1994</u>), which were knowingly and overtly recorded by a voice-recorder while each participant watched the same, randomly selected pile of video-sequences (N=107). The verbalizations utterances were audio-recorded, written down and sorted digitally. Additionally, a random pile (N=49) of verbalizations and comments were sorted by the author and one other psychologist in order to examine the agreement in the assignment of the comments into the categories. Cohen's Kappa was used as the statistical measure of the interrater-reliability.

Results: Generally, results underline the expected structure of cognitions. The four dimensions were found again: perception of funniness was the most obvious one and generally expressed by laughter and mirth, the typical 'haha'. Severity was referred to by statements in the form of empathy-like feeling and expressing the pain of the victim, such as 'oh no!', 'auhh, that hurts' or 'oh my god'. Attributions of blamability were stated by comments as 'is he stupid? ' and 'idiot!'. Riskiness was indirectly stated by ironic verbalizations as 'what a good idea' and 'this (behavior, i.e. stunt) can't go well'. Cohen's Kappa as the statistical measure of interrater-reliability was .64, which constitutes a 'substantial agreement' (Landis & Koch, 1977).

Conclusion: This pilot-study extends the findings from the focus-group; a 'perception of sweetness' was found additionally, but solely in those clips that show funny babies, kids or animals. Verbalizations as 'sweet' and 'cute' are representative of this sort of cognitions. This category was not found before, because the video material in the focus-group did not contain baby-videos. Furthermore, a 'perception of disgust' was found, but again solely in those clips that depict animals. For example, one participant reacted with 'this is disgusting' or 'this is cruelty' while seeing a very fat cat lifted up by its owner. Besides, there were statements that fit into a category of 'identification and comprehension of content', such as 'what did he say?' and 'the dog has to run more than the grandma, the grandmother only runs 10 meter'. These statements are rather uninteresting for analysis, because they only represent comprehension or reproduction of the plot and the story line. However, one could also argue that they are indeed interesting, because attributions of the riskiness of a specific behavior greatly hinges on the comprehension of the clips. As an example, consider the fact that if one does not understand or identify precisely what was shown in the clip, one cannot estimate its potentially negative outcomes.

| #1 | Trying to jump over a table into a swimming-pool, but slipping away |
|--------------------------|--|
| #2 | Jumping down stairs on skateboard, but failing to land properly |
| #3 | Trampoline-jumping, but instead making a backflip and fall out of the trampoline |
| #4 | Jumping from a roof, but rather falling down |
| #5 | Bullriding, falling down and get the knee crushed by the bull |
| #6 | Trying jump on a ramp by skateboard, but instead hitting the ramp |
| #7 | Tarzan-like hanging on the rope when the rope breaks |
| #8 | Trying to jump over chairs into a swimming-pool, but instead hitting the chairs |
| #9 | Diver submerging, but gets stucked to the boat |
| #10 | Trying to jump onto a trampoline but instead hitting the metal-bars of the |
| | trampoline |
| #11 | Kid trying to catch a branch while jumping, doesn't reach it and instead falls into |
| | mud |
| #12 | Trying to grind a rail while jumping down stairs by skateboard, instead falling |
| #13 | Jumping over a person, but instead hitting victim's head with genitals |
| #14 | Riding down stairs by skateboard, breaking arm |
| #15 | Making a backflip with the help of jumping against a tree, instead hitting the head |
| | against the tree |
| #16 | Trying to jump from one trampoline onto another one, instead landing between the |
| | suspensions |
| #17 | Trying to grind a rail while jumping down stairs by bike, but instead falling on a soft |
| | ground |
| #18 | I rying to grind a rail while jumping down stairs by skateboard, but instead hitting |
| #10 | the rail with the back |
| #19 | Riding blke over small nills, nitting a nill and failing forwards |
| #20 | Trying to jump down and over an edge, instead mitting his head against concrete |
| #21 | ankle while landing |
| #22 | Trying to jump over playground toys instead slipping away on the toy |
| #22 | lumning over hurdles in a race, instead landing in the water |
| #23 | Riding hike over small hills, hitting a hill and falling forwards |
| #25 | Trying to make a front-flip over an edge instead bitting the ground with face |
| #26 | Trying to iump off a boat instead slipping away and falling on the ground |
| #27 | Trying to make a motorbike-stunt by braking with front-wheel instead falling |
| "2" | forwards |
| #28 | Trying to grind a rail while jumping down stairs with inline-skates, instead hitting the |
| 0 | rail with testicals |
| #29 | Trying to jump over a table, instead falling forwards |
| #30 | Trying to jump over a garbage-bin instead bitting the bin with testicals |
| | ן דרעוווא נט זעוווף טעבו מ אמושמאב-שווו, ווואנכמט ווונוווא נווב שוו אונוו נכאונמוא |
| #31 | Trying to jump over a container, instead hitting a wall |
| #31 #32 | Trying to jump over a container, instead hitting a wall Trying to make a handstand on a car, instead falling backwards breaking the |
| #31 #32 | Trying to jump over a container, instead hitting a wall Trying to make a handstand on a car, instead falling backwards breaking the windscreen of the car |
| #31 #32 #33 | Trying to jump over a container, instead hitting a wall Trying to make a handstand on a car, instead falling backwards breaking the windscreen of the car Girl riding downhill on a bike, brakes with frontwheels and falls forwards |
| #31 #32 #33 #34 | Trying to jump over a container, instead hitting a wall Trying to make a handstand on a car, instead falling backwards breaking the windscreen of the car Girl riding downhill on a bike, brakes with frontwheels and falls forwards Jumping from height, but instead of landing gracefully, he just falls like a sack |

 Table 3: Index of the stimulus-sequences and description of content

| #36 | Trying to grind a rail while jumping down stairs by bike, but at the end the bike |
|-----|--|
| | somersaults and the guy falls forwards |
| #37 | Trying to jump over chairs, instead falling forwards |
| #38 | Doing a 180° rotation with bike in a halfpipe, but landing fails and the guy falls |
| | forwards on the ground |
| #39 | Trying to grind a very long rail while jumping down stairs, but instead the guy falls |
| | from height directly on his arm |
| #40 | Jumping over a wide edge with bike, but eventually riding against a tree |
| #41 | Trying to make a backflip on a park bench, but instead falling on the back |
| #42 | Doing a huge frontflip from a footbridge, but instead of landing on the sand, the guy |
| | lands on the head of another guy. |
| #43 | Riding bike over big hills, hitting a hill and falling forwards |
| #44 | Trying to jump over a fence with skateboard, but instead falls over the fence and |
| | twists his knee |
| #45 | Trying to jump over a fence, but the guy slips away and knocks against the fence |
| #46 | Trying to make a backflip with the help of jumping against a wall, but the wall cracks |
| | and the guy falls on the ground |
| #47 | Making a 360° rotation over a platform, but landing fails and the guy falls |