

- Liebes, T., & Ribak, R. (1992). The contribution of family culture to political participation, political outlook, and its reproduction. *Communication Research*, 19(5), 618-641.
- Mandelzys, L., & Naveh, C. (2006). American crisis—Israeli narrative: The role of media discourse in the promotion of a war agenda. In A. G. Nikolaev & E. A. Hakanen (Eds.), *Leading to the 2003 Iraq war: The global media debate* (pp. 201-218). New York: Palgrave Macmillan.
- Peled, T., & Katz, E. (1974). Media functions in wartime: The Israeli home front in October 1973. In J. G. Blumler & E. Katz (Eds.), *The uses of mass communications: Current perspectives on gratifications research* (pp. 49-69). Beverly Hills, CA: Sage.
- Raviv, A., Oppenheimer, L., & Bar-Tal, D. (Eds.). (2005). *How children understand war and peace: A call for international peace education*. San Francisco, CA: Jossey-Bass.
- Ribak, R. (1997). Socialization as and through conversation: Political discourse in Israeli families. *Comparative Education Review*, 41(1), 71-96.
- Romer, D., Jamieson, K. H., & Aday, S. (2003). Television news and the cultivation of fear of crime. *Journal of Communication*, 53(1), 88-104.
- Smith, S. L., & Moyer-Guse, E. (2006). Children and the war in Iraq: Developmental differences in fear responses to TV news coverage. *Media Psychology*, 8(3), 213-237.
- Smith, S. L., Moyer-Guse, E., Boyson, A. R., & Pieper, K. M. (2002). Parents' perceptions of children's fear responses to terrorist attacks. In B. S. Greenberg (Ed.), *Communication and terrorism* (pp. 193-208). Cresskill, NJ: Hampton.
- Smith, S. L., & Wilson, B. (2002). Children's comprehension of and fear reactions to television news. *Media Psychology*, 4(1), 1-26.
- Teichman, Y. (2001). The development of Israeli children's images of Jews and Arabs and their expression in human figure drawings. *Developmental Psychology*, 37(6), 749-761.
- Teichman, Y., & Zafrir, H. (2003). Images held by Jewish and Arab children in Israel of people representing their own and the other group. *Journal of Cross Cultural Psychology*, 34(6), 658-676.
- Walma van der Molen, J. H. (2004). Violence and suffering in television news: Toward a broader conception of harmful television content for children. *Pediatrics*, 113, 1771-1775.
- Walma van der Molen, J. H., Valkenburg, P.M., & Peeters, A.L. (2002). Television news and fear: A child survey. *Communications: The European Journal of Communication Research*, 27, 303-317.
- Wober, M., & Young, B. M. (1993). British children's knowledge of, emotional reactions to, and ways of making sense of the war. In B. S. Greenberg & W. Gantz (Eds.), *Desert Storm and the mass media* (pp. 381-394). Cresskill, NJ: Hampton.

DUTCH CHILDREN'S EMOTIONAL REACTIONS TO NEWS ABOUT THE WAR IN IRAQ

*Influence of Media Exposure,
Identification, and Empathy*

Juliette H. Walma van der Molen

Elly A. Konijn

Today, news information reaches us through an ever-increasing stream of both public and commercial TV and radio news programs, (free) newspapers, and the Internet. Although children may get their news information from different resources (family, school, or the media), TV is by far their main source of knowledge about human or political crises, fires and accidents, and crime and war (Ball-Rokeach, 2001; Children Now, 1994; Walma van der Molen & van der Voort, 2000a, 2000b). Many older elementary school children claim they watch the news because they find it important to stay informed (Hoffner & Haefner, 1994). However, even if children do not choose to watch the news, they are still frequently confronted with it when they are looking for other programs or when their parents are watching (Cantor & Nathanson, 1996). Furthermore, with the growing practice of interrupting other programming to report on breaking news stories, children of all ages may be regularly confronted with news information.

A number of studies have observed an increasing trend to present more violent news topics and to supplement regular news items with progressively more sensational and graphic pictures (e.g., Slattery, Doremus, & Marcus, 2001; Slattery & Hakanen, 1994). Apart from these general trends in report-

ing violence, much of which is crime related, the past few years have witnessed several major catastrophic terrorist and war-related events that were covered extensively through broadcast news programs around the world. Most notably, media coverage of the attacks on September 11, 2001, and of "Operation Iraqi Freedom" was unprecedented in its drama, as well as in terms of witnessing in one's own living room the complete sequence of violence—threat of violence, actual violent events, and harmful consequences (see Walma van der Molen & de Vries, 2003). With the use of amateur videos as well as other new techniques, such as placing cameras on army vehicles, violent events were covered from many different camera angles, and the film footage contained extensive, often graphic pictures of the actual ongoing violence, as well as extreme physical and emotional distress.

It is conceivable that children, like adults, may become fearful and worried about their own safety due, in part, to such widespread reporting of violent news. Thus far, however, only a handful of studies specifically investigated the harmful health effects that portrayals of violent news may have on children. Studies investigated children's reactions to specific events, such as the explosion of the Challenger (Wright, Kunkel, Pinon, & Huston, 1989), news coverage of the first Gulf War (e.g., Hoffner & Haefner, 1993; van der Voort, van Lil, & Vooijs, 1993), and news about the 9/11 attacks (Duggal, Berezkin, & John, 2002; Redlener & Grant, 2002). Such studies reveal that many children experienced strong and enduring emotional reactions due to their exposure to these news contents, even if they were not geographically affected by the events. Other studies show that many elementary school children sometimes experience fear in reaction to regular news, such as reports of crime, natural disasters, and ordinary news about traffic accidents, and that 10% to 20% of these children describe their feelings as intense to very intense (Cantor & Nathanson, 1996; Smith & Wilson, 2000, 2002; Valkenburg, Walma van der Molen, & Peeters, 2001; Walma van der Molen & Bushman, 2005; Walma van der Molen, Valkenburg, & Peeters, 2002). In addition, it was found that many children are more worried about violence in TV news than about fictional violence, due to the reality of the violence portrayed in news broadcasts (Huston, Wright, Alvarez, Truglio, Fitch, & Piemyat, 1995; Walma van der Molen & Bushman, 2005).

As argued more extensively elsewhere (Walma van der Molen, 2004), given the previous findings, it is remarkable that the public and scientific debate about the inappropriateness of media violence for children thus far has focused mainly on the negative effects of violence in entertainment programming, and far less on real-life violence depicted in news programs. Yet within communication research, there is a fairly well-established notion that viewers' psychological reactions to media content share many similarities with reactions to real-life stimuli, and that the more similarities a mediated

threatening stimulus shares with a real fear-provoking stimulus, the greater the chance of eliciting a comparable reaction (e.g., Cantor, 2002; Levin & Simons, 2000). Therefore, in an attempt to advance study of the possible negative consequences of violent news content among a child audience, the present study investigated emotional reactions to news coverage of "Operation Iraqi Freedom" among a sample of 10- to 12-year-olds in the Netherlands. Unlike previous studies of children's reactions to violent news content that have focused for the most part on children's fear responses, we studied children's fears as well as their worries, anger, physiological reactions, and sleep disturbances.

Based on the results of the previously mentioned studies of children's fear responses to regular and special violent news contents, we assumed in the present study that exposure to news coverage about the attacks on Iraq would lead to emotional reactions in many of the children in our sample. At the same time, however, we expected differences in the prevalence of emotions among different subgroups of children.

The psychological media literature suggests several variables that may influence viewers' emotional reactions to mediated messages. Most notably, it has been found that in the case of emotional effects of fictional media violence, viewers' involvement with the media content or the media characters usually plays a central role in determining emotional responses, either through identification (e.g., Hoffner & Cantor, 1991; Huston et al., 1995) or empathy (e.g., Tan, 1996; Wilson & Cantor, 1985; Zillmann, 1991). To the best of our knowledge, identification and empathy have thus far not been included in investigations of children's emotional reactions to news content. Based on the aforementioned studies, however, it is highly probable that, in the case of real-life violence committed on real people, involvement with the mediated persons is an important factor as well (see Konijn & Hoorn, 2005). Therefore, parallel to studies of the emotional effects of fictional violence, the present study investigated the extent to which identification and empathy (in addition to exposure to the war news per se) affected children's emotional reactions to the news coverage.

EXPOSURE TO THE WAR NEWS

Within classical cultivation theory (Gerbner & Gross, 1976; Gerbner, Gross, Morgan, Signorielli, & Shanahan 2002), it has been hypothesized that heavy TV viewers make higher estimations of the amounts of violence in society and believe they have a higher chance of becoming a victim of violence than do light viewers. This theory has been criticized over the last 20 years, in

part, for insufficient consideration of viewers' personal background variables and because it did not discriminate between different types of TV programs. Some studies, however, did take these factors into account and specifically investigated the effect of the amount of news exposure on adult viewers' fears and worries. The results of these studies did indicate exposure effects, especially in the case of frequent watching of violence-laden news programs such as many local American TV news broadcasts (e.g., O'Keefe & Reid-Nash, 1987; Romer, Jamieson, & Aday, 2003).

A suggested explanation for the effect of the amount of exposure on viewers' emotional reactions is that higher exposure to media violence leads to higher memory accessibility of examples of violence, which may account in turn for higher estimates of societal violence and personal vulnerability (for an explanation of exemplar accessibility, see Busselle & Shrum, 2003; Shrum, 1999). In the case of the news coverage about the war on Iraq, such a memory accessibility explanation seems plausible particularly because the news coverage was filled with detailed images of violence and with recurring discussions about the possible escalation of the conflict and the chance of new terrorist attacks. Therefore, in the present study, we applied this line of inquiry to investigate whether children who were more exposed to this news contents experienced more emotional reactions than children who were less exposed. At the same time, we examined the effect of involvement with the news content on children's emotional reactions.

INVOLVEMENT WITH THE WAR NEWS

Research in cognitive emotion psychology has assumed that an emotion is elicited in response to a stimulus or situation that is relevant to someone's personal concerns, motives, needs, or goals—when these interests are threatened or when a situation entails the possibility of accomplishing one's goals or interests (Frijda, 1986; Lazarus, 1991). Such an occurrence is not confined to real-life situations, but may also take place within one's imagination or could be an occurrence that is represented in the media. Several studies of the effects of media violence have demonstrated that purely fictional accounts of violence may also elicit involvement and emotion in viewers (e.g., Cantor, 2002; Konijn & Hoorn, 2005). In the case of fiction, the goals and interests affected by the violent images may be quite diverse, for example, because fictional violence may not only threaten personal concerns, but may also fulfill an entertainment function (e.g., Tan, 1996).

However, in the case of real mediated violence, such as images of the war in Iraq, it may be readily assumed that, especially among children, the goals that are primarily affected are those of safety and security (so-called

source concerns; see Frijda, 1986), yet the viewer may feel as if a threatening situation is also happening to him or herself—a reaction called *identification* (Cupchik, 1997; Stotland, 1969). A key aspect of identification is the extent to which the viewer perceives similarities between his or her own situation and the depicted situation or between him or herself and a media character. This has been described by Cupchik (1997) as "feeling what it is like to be that person" (p. 20). Within cognitive emotion psychology, it has been found that these experienced feelings of similarity may increase affective reactions in viewers. In addition, viewers may experience feelings of empathic concern for the emotions or experiences of others (e.g., Eisenberg, 2000; Tan, 1996; Zillmann, 1991). They may feel concerned about the well-being of media characters or they may feel the need to help mediated victims of violence. In general, it is found that people who experience more empathic concern display more emotional reactions to violence committed against others than do people with lower levels of empathic concern. Taken together, identification and empathy constitute involvement, and, as such, these two factors might increase or decrease the emotional impact of news information. For example, it is conceivable that children who were equally exposed to news about the war in Iraq did react differently depending on the degree to which they identified with or felt empathic concern for the people involved in the war.

Research has shown that the level of realism of mediated images influences viewers' involvement (Konijn & Hoorn, 2005). Examples of cinematographic techniques that increase the reality of fictional content are: filmed close-ups of the emotions of media characters, zooming in on situational details, or highlighting personal background information. Such techniques are also used increasingly in TV news in an attempt to grasp and hold the attention of viewers (Knobloch, Patzig, Mende, & Hastall, 2004). In the news coverage of the war in Iraq, these laws of fiction were applied to an even greater extent, particularly through the use of new techniques such as filming ongoing combat from army vehicles and the detailed reporting of *embedded journalists*. The application of such techniques may have increased the reality of the war images and the opportunities for viewers to become involved in the news content. Therefore, in the present study, we explored the effects of identification and empathy on children's emotional reactions to the war news while controlling for three relevant child characteristics.

Child Characteristics

Cultural Background. In the present study, it was expected that cultural background could be one important background variable that affected children's involvement with and emotional reactions to news about the war in Iraq. The primary school population of Amsterdam in the Netherlands

where we conducted our study consists of children from different cultural and/or ethnic backgrounds, such as Arab children from North African families or children whose families originally came from Surinam or the Antilles. In the present study, we assumed that children from Arab families would feel more connected to the people of Iraq than children from other cultural backgrounds. Based on psychological and emotional theories of media, we expected that children from an Arab background would see more similarities between themselves and the Iraqi people (cf. Cupchik, 1997) even if they had no real association (e.g., family ties) with the people in this area.

In addition to the psychological and emotional media literature, theories about the social psychology of group identity predict that involvement with one's own ethnic group is an important component of identity, which is believed to be mainly determined by the extent to which people are similar in language, religion, or other cultural indicators (Frable, 1997). Moreover, group commitment has been found to be an important determinant of the manner in which individuals react to group threats (Ellemers, Spears, & Doosje, 2002; McCoy & Major, 2003). In general, these and other studies indicate that the higher someone's group identity and the greater the perceived group threat, the greater the prevalence of individual emotional reactions. Studies on the effects of group commitment, however, have to date been conducted predominantly among adult samples. Therefore, in the present study, we investigated the influence of cultural background on involvement among a child sample and studied how cultural background was related to children's individual emotional reactions to the war news.

News Interest. Differences in news exposure, identification, and empathic concern could also be related to the extent to which children find it important or interesting to follow the news. Although news interest and news exposure are usually lower among child audiences than among adults, research has shown that many children are active news consumers (Hoffner & Haefner, 1994). A number of studies (e.g., Hoffner & Haefner, 1994; Wright et al., 1989) found that news interest was not only related to children's news consumption, but also to the extent to which they reacted emotionally to certain violent news events. Because the news about Iraq was omnipresent during the first weeks of the war, we suspected that many children would follow a considerable amount of the war coverage, and we investigated whether differences in exposure to the war news were related to children's news interest. In addition, we investigated how news interest was related to children's involvement and their emotional reactions to the war coverage.

Gender. Many clinical (e.g., Muris, Meesters, Merckelbach, Sermon, & Zwakhalen, 1998; Muris, Merckelbach, Gadet, & Moulart, 2000) and psy-

chological studies of children's media-related self-reported fears (e.g., Peck, 1999; Walma van der Molen et al., 2002) have shown that boys are less inclined to report fears and worries than are girls. In addition, research has shown that boys report less empathic concern than do girls (e.g., Eisenberg, 2000). Although it is generally believed that gender differences in self-reported fears are due to differential childrearing practices, rather than to a lower susceptibility to fears for boys compared with girls (e.g., Brebner, 2003), it is important to control for gender differences in a study of the effect of a factor such as empathic concern on children's emotional reactions. Therefore, in the present study, the third and final control variable taken into account was children's gender.

HYPOTHESES

Based on the theory outlined earlier, we investigated the following hypotheses.

- H1: Children who are exposed more to news of the war react with more fears, worries, anger, physical reactions, and sleep disturbances than children who are less exposed to war news.
- H2: Children who identify more with the people of Iraq react with more fears, worries, anger, physical reactions, and sleep disturbances than children who identify less with the people of Iraq.
- H3: Children who experience more empathic concern for the people of Iraq react with more fears, worries, anger, physical reactions, and sleep disturbances than children who experience less empathic concern for the people of Iraq.

METHOD

Participants

A paper-and-pencil survey was administered during the first 2 weeks of "Operation Iraqi Freedom" (March 26th–April 11, 2003) at eight primary schools located in the city of Amsterdam in the Netherlands. After the schools agreed to participate in the survey, parents were informed about the nature of the study and asked to give their consent. Children of parents who did not want their child to take part in the survey were excluded from participation. Four hundred and forty-six children from Grades 5 ($n = 235$) and

6 ($n = 211$) (M age = 11 years, 2 months) participated in the study. There were 222 boys and 224 girls. Although 89.6% of the children were born and raised in the Netherlands, children came from multiple cultural backgrounds: 30.5% came from completely Dutch families, 31.0% had at least one parent who was born in Morocco, 14.5% had at least one parent who was from Turkey, 19.5% had at least one parent from Surinam or the Dutch Antilles, and 4.5% of the children had parents who were born in other countries.

Procedure

Children filled in the questionnaire in their own classroom. After a short introduction by the principal researcher, each child completed the survey at his or her own pace. If a child had difficulty understanding a particular survey item, the researcher provided individual feedback. After all children in the class completed the questionnaire, children were debriefed and given ample opportunity to ask questions about the nature and purpose of the study. In addition, children were given the opportunity to talk about their emotions with the researcher and with their classroom teacher, and to discuss ways to cope with their negative feelings.

Measures

Apart from demographic questions about children's age, gender, and cultural background, the questionnaire consisted of items that tapped children's exposure, identification, empathic concern, news interest, and emotional reactions to the news coverage.

Exposure. On a 4-point scale (ranging from *never* to *every day*), children rated how often they had followed the news about the (threat of) war during the past month and during the past week. The two items were averaged to form an index of exposure (Cronbach's $\alpha = .71$). For purposes of analysis, children were grouped into more and less exposed, using the median of scores on the exposure index as cutoff score.

In addition, children ranked media they used predominantly to follow news about the war. Here, they were asked to indicate two principal news sources out of six options (TV-news, newspapers, radio news, Internet, friends and family, and school). Subsequently, they were asked to specify the two television news channels or programs that they used most often. Options were: the Dutch children's news, the main Dutch public news broadcast, Dutch commercial news programs, CNN, and other foreign news channels such as the BBC and Al Jazeera.

Identification. Identification was measured using a 4-point scale (*never, sometimes, often, very often*) for the six items (Cronbach's $\alpha = .88$) that tapped the similarity children observed between themselves and the people involved in the war in Iraq, and to what extent they felt what it was like to be in that position. The scale was based on Protherough's (1983) classification of the para-social distance-involvement relationship that readers of literary fiction may develop with a text or with characters in a story. Protherough distinguished five levels of involvement/identification that varied from detached evaluation of the message to total identification with the portrayed situation or character(s). The items edited for child and adolescent readers and validated in a study by van der Bolt (2000) were adopted for the situation of the news. Examples of items are: "When I see victims of the war, I recognize myself in them" and "When I see news about the war, it seems as if everything is happening to me as well." The six items were averaged to form an index of identification.

Empathic Concern. Empathic concern was measured using a 4-point scale (*never, sometimes, often, very often*) for the eight items (Cronbach's $\alpha = .88$) that assessed children's concern or compassion for people involved in the war. Contrary to the items that were designed to tap identification, the empathic concern items did not include statements about the extent to which children felt absorbed in the war or in victims' misfortune, but consisted solely of items that assessed children's concerns for the well-being of others. Based on previous research by Strayer (1989) and van der Bolt (2000), the items included such statements as: "I feel for the victims of the war" and "When I see news coverage of people that are involved in the war, I feel concern for them." The eight items were averaged to form an index of empathic concern.

News Interest. On a 3-point scale (ranging from *not at all* to *very much*), children rated how important they thought it was to follow news about the war and how interested they were in the news coverage. The two items were averaged to form an index of news interest (Cronbach's $\alpha = .70$).

The remaining part of the questionnaire consisted of 26 items designed to measure children's emotional reactions to news about the war. On a 4-point scale (*never, sometimes, often, very often*), children were asked to identify how often they experienced a certain reaction. The random list of items measured children's fear, worry, anger, physiological reactions, and sleep disturbances. A principal axis factor analysis with oblique (promax) rotation was conducted. After exclusion of five items that did not load high on any of the factors or that had cross-loadings with other factors higher than .30, a four-factor solution that explained 60.70% of the variance provided the best fit of the data. Factor loadings for the 21 items ranged

between .48 and .90, and there were no cross-loadings higher than .26. Correlations between the four factors ranged between $r = .48$ and $r = .66$. On the basis of the four-factor structure, separate scales were constructed by averaging a child's score on each set of items that defined a scale. The four scales are discussed next.

Fear. This subscale consisted of four items (Cronbach's $\alpha = .84$) that measured children's fearful affective reactions to the news coverage. Examples of items are: "When I see news about the war in Iraq, I become frightened" and "When I see news about the war in Iraq, I feel scared."

Worry. The worry scale consisted of five items (Cronbach's $\alpha = .77$) that assessed children's fearful cognitive reactions to news about the war. Examples of items are: "When I see news about the war in Iraq, I become afraid that our part of the world will also be affected by the conflict" and "I have distressing thoughts about what I see in the news about Iraq."

Anger. This subscale consisted of four items (Cronbach's $\alpha = .84$) that measured the prevalence of children's angry feelings due to news about the war. Examples of items are: "News about the war in Iraq makes me angry" and "News about the war in Iraq makes me aggravated."

Physical Reactions. Unexpectedly, the items about children's physiological reactions and their sleep disturbances all loaded on one factor. Therefore, one subscale was constructed consisting of eight items that tapped both types of emotion-related physical reactions (Cronbach's $\alpha = .86$). Examples of items are: "When I see news about the war in Iraq, my hart starts pounding" and "News about the war in Iraq causes me to loose sleep at night."

RESULTS

The presentation of the results begins with an overview of initial descriptive analyses conducted for several variables in our study. These analyses provide general information on characteristics of our participants, their news exposure, involvement, news interest, and average emotional reactions. Subsequently, there is a presentation of the investigation conducted in order to determine the extent to which the hypothesized control variables (cultural background, news interest, and gender) should be included as covariates in our main analysis of the influence of exposure and involvement on children's emotional reactions to news about the war. Finally, the results of the main analysis, in which our hypotheses were tested, are presented.

Initial Descriptive Analyses

Exposure. All of the children surveyed had followed the news about "Operation Iraqi Freedom." In all, 6.7% of the children indicated that they had followed the news once a week, whereas the vast majority had followed the war news several times a week or everyday. Despite this massive exposure of children to the news coverage, for purposes of analysis we needed to categorize children into categories of more and less exposed. Based on a median split, children were categorized as (a) less exposed when they followed the news once or several times a week (49.6%); or (b) more exposed when they followed the news every day (50.4%).

Children's main source of news about the war was TV. Children were asked to indicate their two principal news sources out of six options. Almost all children (95.5%) indicated that they predominantly followed the news on TV. Other (secondary) news sources were: newspapers (42.2%), radio (6.8%), the Internet (14.3%), family and friends (20.7%), and school (16.5%). Subsequently, children specified the two TV news channels or programs that they used most often. In order of appearance, percentages were: the Dutch children's news (63.9%), the main Dutch public news broadcast (42.8%), Dutch commercial news programs (46.7%), CNN (17.9%), and other foreign news channels, predominantly Al Jazeera (26.2%).

Identification and Empathic Concern. Identification, on average, was quite low. The mean score for identification was 1.72 ($SD = .77$). About 38% of the children indicated that they never identified with the people involved in the war, whereas about 6% reported to identify very often. For purposes of analysis, using the median (1.50) as cutoff score, children were divided into two groups: one that did not experience or hardly experienced identification (60.1%; $M = 1.20$, $SD = .18$), and one that did experience identification with those involved in the war (39.9%; $M = 2.50$, $SD = .65$). Contrary to identification, the average prevalence of empathic concern was quite high ($M = 2.80$, $SD = .73$). Based on a median split (2.75), children were categorized as less empathic (50.7%; $M = 2.20$, $SD = .42$) and more empathic (49.3%; $M = 3.43$, $SD = .37$).

News Interest. Despite the previously mentioned finding that the vast majority of children were exposed to the war news at least several times a week, not all children found it equally important and interesting to follow the news coverage. Of all children, 47.3% found it very important and interesting to follow the war news. A minority of the children, however, reported to have no interest in the news at all (4.5%), whereas 48.2% found it only a little important and interesting. For purposes of analysis, children were grouped into more (47.3%) and less (52.7%) interested, using the median on the news interest index as a cutoff score.

Children's Emotional Reactions. Table 4.1 presents the intercorrelations (zero-order correlations) and descriptive statistics for the four emotional reactions to the war news that were measured in this study. As listed in Table 4.1, anger was the emotion reported most frequently, followed by fear, worry, and physical reactions. In addition, Table 4.1 shows that all emotional reactions were significantly correlated. Because of the observed intercorrelations among the dependent variables, in subsequent analyses, multivariate analyses of variance (MANOVA) techniques were used to assess possible main and interaction effects of exposure, identification, and empathy on children's emotional reactions.

Effects of Cultural Background, News Interest, and Gender

To investigate the possible effects of the control variables cultural background, level of news interest, and gender on (a) exposure to the news, (b) identification, (c) empathic concern, and (d) children's emotional reactions to the news coverage, several analyses were conducted. As is clear from the following, the results of these analyses confirmed our assumption that cultural background, news interest, and gender are associated with the other variables in the study, and should thus be used as covariates in an investigation of the effects of news exposure, identification, and empathy on children's emotional reactions to the war news.

TABLE 4.1
Zero-Order Correlations and Descriptive Statistics
for Children's Emotional Reaction Variables

	FEAR	WORRY	ANGER	PHYSICAL
Fear	—			
Worry	.62**	—		
Anger	.47**	.57**	—	
Physical	.65**	.67**	.51**	—
<i>M (SD)</i>	2.37 (.83) _b	2.31 (.72) _b	2.62 (.94) _a	1.56 (.59) _c

Note. Mean scores represent mean prevalence of children's emotional reactions that could range from 1 (never) to 4 (very often).

**All correlations were significant at $p < .001$.

a, b, c Mean scores with different subscripts differed significantly at $p < .001$ by paired samples t tests.

Cultural Background. To investigate the effects of cultural background, children were grouped into participants with an Arab (32.9%) versus non-Arab (67.1%) background. The majority of children categorized as Arab came from Moroccan families. Chi-square tests were conducted to investigate the association of Arab versus non-Arab children with exposure, identification, and empathy. Results show that children from an Arab background were overrepresented in the high-exposure group compared with children from non-Arab backgrounds, $\chi^2(1, N = 446) = 13.18, p < .001, \Phi = .17$. In addition, children from an Arab background more frequently identified with those involved in the war, $\chi^2(1, N = 446) = 13.59, p < .001, \Phi = .18$, and scored higher on empathic concern, $\chi^2(1, N = 446) = 24.80, p < .001, \Phi = .24$, than children from non-Arab backgrounds. Finally, a MANOVA was conducted to assess the effect of children's cultural background on their emotional reactions. This analysis yielded a significant multivariate main effect for cultural background, Wilks' $\Lambda = .87, F(4, 441) = 16.03, p < .001, \eta^2 = .13$. Mean scores, F ratios, and effect sizes for the univariate effects on each emotional reaction are presented in Table 4.2. As listed in Table 4.2, univariate F tests showed that Arab children scored higher on all four emotional reactions than the non-Arab children.

News Interest. To investigate the effects of news interest, chi-square tests were conducted to investigate the association of more versus less interest in the war news with exposure, identification, and empathy. Results show that children who were more interested in the news were overrepresented in the high-exposure group compared with children who were less interested, $\chi^2(1, N = 446) = 78.60, p < .001, \Phi = .42$. In addition, more interested children more frequently identified with people involved in the war, $\chi^2(1, N = 446) = 14.69, p < .001, \Phi = .18$, and more frequently scored high on empathic concern, $\chi^2(1, N = 446) = 34.40, p < .001, \Phi = .28$, compared with children who were less interested in the war news. Finally, a MANOVA yielded a significant multivariate main effect for news interest, Wilks' $\Lambda = .84, F(4, 441) = 21.45, p < .001, \eta^2 = .16$. As presented in Table 4.2, univariate F -tests showed that children who were more interested in following the news about the war in Iraq scored higher on all four emotional reactions than the children who were less interested.

Gender. To investigate the effects of gender, chi-square tests were conducted to investigate the association between boys versus girls and exposure, identification, and empathy. Results show that boys were somewhat overrepresented in the high-exposure group $\chi^2(1, N = 446) = 4.60, p < .033, \Phi = .10$. There was no statistically significant difference between boys and girls in the frequency with which they identified with people involved in the war. However, girls more frequently scored high on empathic concern compared

TABLE 4.2
Means Scores, F Ratios, and Effect Sizes for Univariate Main Effects of Cultural Background, Level of News Interest, and Gender on Children's Emotional Reactions to the War News.

	CULTURAL BACKGROUND			NEWS INTEREST			GENDER		
	MEAN SCORES			MEAN SCORES			MEAN SCORES		
	ARAB	NON-ARAB	F(1, 444) η^2	MORE	LESS	F(1, 444) η^2	BOYS	GIRLS	F(1, 444) η^2
Fear	2.65 (.80)	2.24 (.82)	24.01** .05	2.67 (.82)	2.10 (.75)	57.41** .11	2.17 (.79)	2.57 (.82)	27.21** .06
Worry	2.63 (.76)	2.16 (.65)	44.49** .09	2.56 (.74)	2.09 (.63)	51.67** .10	2.25 (.73)	2.36 (.72)	2.57 .00
Anger	2.94 (.92)	2.47 (.91)	25.41** .05	2.95 (.90)	2.31 (.87)	56.82** .11	2.57 (.97)	2.66 (.92)	1.05 .00
Physical	1.86 (.70)	1.43 (.67)	57.48** .12	1.77 (.67)	1.38 (.57)	51.94** .10	1.50 (.57)	1.63 (.60)	6.06* .01

Note. Mean scores (with standard deviations in parentheses) represent mean prevalence of children's emotional reactions that could range from 1 (never) to 4 (very often).

* $p < .05$.

** $p < .001$.

with boys, $\chi^2(1, N = 446) = 6.56, p < .012, \Phi = .12$. Finally, a MANOVA yielded a significant multivariate main effect for gender, Wilks' $\Lambda = .93, F(4, 441) = 8.08, p < .001, \eta^2 = .07$. As presented in Table 4.2, univariate F -tests showed that this effect was due to the fact that girls reported more fears and more physical reactions, such as sweating or sleep disturbances, than boys did.

Hypotheses Testing

To investigate the influence of media exposure, identification, and empathic concern on children's emotional reactions to the news about "Operation Iraqi Freedom," a 2 (more vs. less exposure) \times 2 (yes vs. no identification) \times 2 (more vs. less empathic concern) MANOVA was conducted with the four emotional reactions (fear, worry, anger, physical) as dependent variables and cultural background, news interest, and gender as covariates. The MANOVA yielded statistically significant multivariate main effects for exposure, Wilks' $\Lambda = .97, F(4, 432) = 3.74, p < .006, \eta^2 = .03$, as well as for identification, Wilks' $\Lambda = .81, F(4, 432) = 24.86, p < .001, \eta^2 = .19$, and empathic concern, Wilks' $\Lambda = .84, F(4, 432) = 20.58, p < .001, \eta^2 = .16$. Thus, even when controlling for influential variables such as cultural background, news interest, and gender, in accordance with our three hypotheses, we found that children who watched more news, and who identified with and felt more empathic concern for the victims of the war, experienced more frequent emotional reactions than children with lower levels of exposure, identification, or empathy. It should be noted, however, that a very low effect size was found for the multivariate main effect of exposure. In addition, as listed in Table 4.3, a statistically significant univariate main effect of media exposure was found only in the case of anger, and not for the other three emotional reactions. As also shown in Table 4.3, statistically significant univariate main effects of identification and empathy were found for all four emotional reactions, such that children who reported higher levels of identification and empathic concern reported considerably more fear, worry, anger, and physical reactions than children with lower levels of identification and empathy. Mean scores, F ratios, and effect sizes for the univariate main effects on each emotional reaction are presented in Table 4.3.

The MANOVA yielded no statistically significant multivariate two- or three-way interactions. The fact that we did not find interaction effects among exposure, identification, and empathy, in conjunction with the fact that we found only a small direct effect of exposure to the war news, could mean that the effect of exposure on emotional reactions mainly progressed indirectly through identification and empathic concern. To explore this option, we conducted another MANOVA with level of exposure to the war news (more vs. less) as a between-subjects factor, identification and empathic

TABLE 4.3
Means Scores, F Ratios, and Effect Sizes for Univariate Main Effects of Exposure, Identification, and Empathic Concern on Children's Emotional Reactions to the War News After Controlling for Cultural Background, News Interest, and Gender.

	EXPOSURE				IDENTIFICATION				EMPATHIC CONCERN			
	MEAN SCORES		F(1, 435)	η^2	MEAN SCORES		F(1, 435)	η^2	MEAN SCORES		F(1, 435)	η^2
	MORE	LESS			YES	NO			MORE	LESS		
Fear	2.45 (.82)	2.21 (.83)	2.41	.01	2.83 (.80)	2.06 (.70)	60.32**	.12	2.71 (.80)	2.03 (.72)	26.50**	.06
Worry	2.44 (.72)	2.05 (.65)	2.36	.00	2.72 (.68)	2.03 (.61)	51.68**	.11	2.67 (.71)	2.01 (.60)	29.84**	.06
Anger	2.80 (.93)	2.25 (.87)	6.24*	.02	3.06 (.86)	2.32 (.88)	19.89**	.04	3.08 (.82)	2.16 (.82)	54.91**	.11
Physical	1.65 (.63)	1.38 (.67)	1.05	.00	1.94 (.68)	1.31 (.54)	73.78**	.14	1.84 (.65)	1.29 (.55)	44.47**	.09

Note. Mean scores (with standard deviations in parentheses) represent mean prevalence of children's emotional reactions that could range from 1 (never) to 4 (very often).

* $p < .05$.

** $p < .001$.

ic concern as dependent variables, and cultural background, news interest, and gender as covariates. This MANOVA yielded a small, but statistically significant multivariate effect of news exposure on the two involvement variables, Wilks $\Lambda = .98$, $F(2, 440) = 3.82$, $p < .024$, $\eta = .02$. Children who were more exposed to the news exhibited more identification ($M = 1.89$, $SD = .82$) and more empathic concern ($M = 2.99$, $SD = .69$) than children who were less exposed ($M = 1.54$, $SD = .67$ for identification and $M = 2.61$, $SD = .72$ for empathic concern, respectively). Both univariate effects were statistically significant, $F(1, 441) = 4.66$, $p < .032$, $\eta^2 = .01$ for identification and $F(1, 441) = 6.39$, $p < .012$, $\eta^2 = .01$ for empathic concern.

DISCUSSION

The children in our sample were exposed widely to news about "Operation Iraqi Freedom" during the first 2 weeks of the second war in Iraq. More than 90% of the children indicated that they followed the news several times a week or even every day, and more than 95% of the children received most of their news information via TV. About 64% of our 10-12 year-olds indicated that their main source of TV news was the children's news program—a daily news program broadcast during the early evening hours that is specifically designed to make the main news comprehensible to children aged 9 to 12 and that is very well watched by children in the Netherlands (Walma van der Molen & de Vries, 2003). Apart from watching this special children's news program, however, most children also followed the main public or commercial news programs that are intended for adult audiences, and they read more newspapers than has been observed in other studies of children's news consumption (e.g., Children Now, 1994; Walma van der Molen & van der Voort, 2000a, 2000b).

Despite the general high exposure to news about the war, the results of the present study reveal clear differences among subgroups of children. Children who were categorized as coming from an Arab background watched more war-related news than other children, children who were more interested in the war news watched more often than children who were less interested, and boys were exposed to the war news somewhat more frequently than were girls. After controlling for these influential background variables, the results of the present study show that more exposure to the war news increased children's anger, but not their fears, worries, or physical reactions. Thus, contrary to what should be expected on the basis of classical cultivation theory (Gerbner & Gross, 1976; Gerbner et al., 2002), in the present study, higher news exposure per se was not related to more fear and worry reactions in older school-age children.

This finding could be due to the fact that news exposure was high during the first 2 weeks of the war among all of the children in our sample. A comparison between light and heavy viewers, which is usually made in cultivation studies, thus became a comparison between frequent and very frequent viewers of war-related news information. However, another explanation that is suggested by our results is that the extent to which children were involved in the war news predominantly contributed to the development of emotions, rather than mere exposure. In the present study, identification with and empathy for the people involved in the war primarily explained differences in children's emotional reactions to the war news. Over a third of the children identified with the victims of war, whereas half of the children felt great empathic concern for the people in Iraq. Results show that emotional reactions were considerably higher in children who felt more involved (either via identification or empathy) with the victims of war than in children with lower levels of involvement, even when cultural background, news interest, and gender were controlled.

These results prompt additional analyses to investigate whether the influence of news exposure on children's emotions progressed indirectly through involvement. Although the effects were small, the results of these analyses indeed indicate that children who were exposed more to war news were more involved in the news situation, either through identification or empathic concern. In other words, our results tentatively suggest an indirect cultivation effect, such that more exposure to the war news increased involvement, which generated stronger emotional reactions. These results are in line with modern cognitive emotion theories, in which it is assumed that emotions are functional for an individual's well-being and elicited only when a stimulus or situation affects someone's personal interests or concerns (Frijda, 1986; Lazarus, 1991). The present results suggest that the significance of the war for the real, Iraqi victims was somehow taken over by our child respondents, which made them more personally involved with the victims and, subsequently, more emotionally aroused by the news content. To our knowledge, involvement variables were not included in previous studies of children's emotional reactions to violent news information. The present study only provided a first exploration of involvement as a possible factor underlying the emotional effects of exposure to violent news content. Further, longitudinal research should test the process described as a model to establish whether the path described earlier indeed provides a good explanation for the influence of news exposure on children's affective reactions.

It should be noted that the fairly large number of children who reported involvement in our study is remarkable because the war news did not contain direct personal threats for the vast majority of children in our sample. Apart from four children who came from Iraqi families, none of the children had any real association, such as family ties, with people in the conflict area. Although our results show that children from an Arab background

displayed more involvement than other children, a fairly large group of participants from non-Arab backgrounds also reported identification with and high empathic concern for the people in Iraq.

An explanation may be found in the results of a content analysis of the Dutch public news programs broadcast during the first week of "Operation Iraqi Freedom" (Nikken, 2003). This analysis revealed that in the Dutch news programs about 40% of the time devoted to news of the war dealt with personal suffering and emotions of Iraqi victims. This is in line with the increasing use of narrative structures in news items and the growing tendency of newsmakers to treat news as drama (Grabe & Zhou, 2003). It is probable that through the recurring display of personal accounts and emotions of real victims, our child viewers had ample opportunity to identify with or feel empathic concern for the people involved in the conflict. Just as viewers of fiction are offered the chance to become involved in media characters through the use of cinematographic techniques such as close-ups of the emotions of media characters or highlighting personal background information, the human-interest approach that was chosen in many of the news broadcasts may have increased the opportunity for viewers to become involved with the victims of war. Further research is needed to investigate how involvement with news content develops among school-age children, which personality and media characteristics predominantly contribute to personal involvement in the case of special or more common news events, and how involvement is related to emotional reactions to news content in children of different age groups.

CONCLUSION

Overall, the results of the present study suggest that children should be considered as serious and frequent news consumers, and our data underscore the importance of including news in the public and scientific debate about the influence of media violence on children. In addition, our study revealed that children might experience involvement with victims of violence and feel angry, fearful, and worried even if they do not run the risk of becoming personally threatened by the news events. The results demonstrate that many Dutch children experienced negative emotional reactions to the war news, and that for the vast majority these reactions primarily stemmed from what they saw in TV news broadcasts. If Dutch children already have this strong emotional response to media coverage of a war in which their country was relatively neutral, it is likely that there were even stronger responses among children from countries that were more directly involved in the war, such as the United States, Iraq, or Israel.

It should be noted that we do not consider children's involvement with mediated violent news content and their emotional reactions to it as necessarily all negative. On the contrary, one could argue that it would be much unhealthier if children would be completely insensitive to images of other people's distress. In addition, many studies have shown that mild fears and worries are a normal part of every child's development (e.g., Muris, Meesters, Merckelbach, Sermon, & Zwakhalen, 1998; Muris, Merckelbach, Gadet, & Moolaert, 2000). However, considering children's frequent watching of news content and news broadcasters' increasing use of violent images and cinematographic techniques to enhance viewers' attention and involvement, we do plea for more awareness of the potential consequences of watching too much TV news violence for children. In addition, we would like to encourage news producers to show more reluctance in the blurring of entertainment and news genres when war is covered.

REFERENCES

- Ball-Rokeach, S. J. (2001). The politics of studying media violence: Reflections 30 years after the violence commission. *Mass Communication & Society, 4*, 3-18.
- Brebner, J. (2003). Gender and emotions. *Personality and Individual Differences, 34*, 387-394.
- Busselle, R. W., & Shrum, L. J. (2003). Media exposure and exemplar accessibility. *Media Psychology, 5*, 255-283.
- Cantor, J. (2002). Fright reactions to mass media. In J. Bryant & D. Zillmann (Eds.), *Media effects: Advances in theory and research* (pp. 287-306). Mahwah, NJ: Lawrence Erlbaum Associates.
- Cantor, J., & Nathanson, A. I. (1996). Children's fright reactions to television news. *Journal of Communication, 46*(4), 139-152.
- Children Now. (1994). *Tuned in or tuned out? America's children speak out on the news media*. Oakland, CA: Author.
- Cupchik, G. C. (1997). Identification as a basic problem for aesthetic reception. In S. Tötösy de Zepetnek & I. Sywenky (Eds.), *The systematic and empirical approach to literature and culture as theory and application*. University of Alberta, Edmonton, Alberta, Canada.
- Duggal, H. S., Berezkin, G., & John, V. (2002). PTSD and TV viewing of World Trade Center. *Journal of the American Academy of Child & Adolescent Psychiatry, 41*, 494-495.
- Eisenberg, N. (2000). Emotion, regulation, and moral development. *Annual Review of Psychology, 51*, 665-697.
- Ellemers, N., Spears, R., & Doosje, B. (2002). Self and social identity. *Annual Review of Psychology, 53*, 161-186.
- Frale, D. E. S. (1997). Gender, racial, ethnic, sexual, and class identities. *Annual Review of Psychology, 48*, 139-162.
- Frijda, N. H. (1986). *The emotions*. New York: Cambridge University Press.
- Gerbner, G., & Gross, L. (1976). Living with television. The violence profile. *Journal of Communication, 26*(2), 173-199.
- Gerbner, G., Gross, L., Morgan, M., Signorielli, N., & Shanahan, J. (2002). Growing up with television. Cultivation processes. In J. Bryant & D. Zillmann (Eds.), *Media effects: Advances in theory and research*. Hillsdale, NJ: Lawrence Erlbaum Associates.
- Grabe, M. E., & Zhou, S. (2003). News as Aristotelian drama: The case of 60 minutes. *Mass Communication & Society, 6*, 313-336.
- Hoffner, C., & Cantor, J. (1991). Perceiving and responding to media characters. In J. Bryant & D. Zillmann (Eds.), *Responding to the screen: Reception and reaction processes* (pp. 63-101). Hillsdale, NJ: Lawrence Erlbaum Associates.
- Hoffner, C., & Haefner, M. J. (1993). Children's affective responses to news coverage of the war. In B. S. Greenberg & W. Gantz (Eds.), *Desert Storm and the mass media* (pp. 364-380). Cresskill, NJ: Hampton.
- Hoffner, C., & Haefner, M. J. (1994). Children's news interest during the Gulf war: The role of negative affect. *Journal of Broadcasting & Electronic Media, 38*, 193-204.
- Huston, A. C., Wright, J. C., Alvarez, M., Truglio, R., Fitch, M., & Piemyat, S. (1995). Perceived television reality and children's emotional and cognitive responses to its social content. *Journal of Applied Developmental Psychology, 16*, 231-251.
- Knobloch, S., Patzig, G., Mende, A., & Hastall, M. (2004). Affective news: Effects of discourse structure in narratives on suspense, curiosity, and enjoyment while reading news and novels. *Communication Research, 31*, 259-287.
- Konijn, E. A., & Hoorn, J. F. (2005). Some like it bad. Testing a model on perceiving and experiencing fictional characters. *Media Psychology, 7*(2), 107-144.
- Lazarus, R. S. (1991). *Emotion and adaptation*. New York: Oxford University Press.
- Levin, D. T., & Simons, D. J. (2000). Perceiving stability in a changing world: Combining shots and integrating views in motion pictures and the real world. *Media Psychology, 2*, 357-380.
- McCoy, S. K., & Major, B. (2003). Group identification moderates emotional responses to perceived prejudice. *Personality and Social Psychology Bulletin, 29*, 1005-1017.
- Muris, P., Meesters, C., Merckelbach, H., Sermon, A., & Zwakhalen, S. (1998). Worry in normal children. *Journal of the American Academy of Child and Adolescent Psychiatry, 37*, 703-710.
- Muris, P., Merckelbach, H., Gadet, B., & Moolaert, V. (2000). Fears, worries, and scary dreams in 4- to 12-year-old children: Their content, developmental pattern, and origins. *Journal of Clinical Child Psychology, 29*, 43-52.
- Nikken, P. (2003). *No war! De oorlog in Irak volgens kinderen en het kindernieuws in Nederland en Duitsland* [No war! The war in Iraq according to children and the children's news in The Netherlands and Germany]. Youth and Media Expert Center (NIZW), The Netherlands.
- O'Keefe, G. J., & Reid-Nash, K. (1987). Crime news and real-world blues: The effects of the media on social reality. *Communication Research, 14*, 147-163.
- Peck, E. (1999). *Gender differences in film-induced fear as a function of type of emotion measure and stimulus content: A meta-analysis and laboratory study*. Unpublished doctoral dissertation, University of Wisconsin, Madison.