

REALITY VS. FICTION

how defined realness affects cognitive & emotional responses to photographs

This experiment investigates cognitive and emotional effects related to changing the label ascribed to still photographs from fictional to real, while keeping the content constant. Viewers tended to react emotionally more strongly to photographs labeled as real, but they thought more about photographs labeled as fiction. Further, the label assigned to the photographs interacted with the viewer's predisposition for learning from visual information. Results are discussed in terms of the need to focus on both content, individual differences, and viewing context factors for determining the meaning of photographs.

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The distinction between realistic and fictional portrayals qualifies emotional and cognitive responses to various types of cultural artifacts, including literature, works of art, music, cinema, and televised content, among others. For instance, when discussing the issue of running graphic photographs of war in newspapers or on television, members of the public inevitably wonder why such images are often withheld from the public by news organizations or why audiences protest such images, when more graphic imagery is often relished in the context of fictional war or horror films. Similarly, several years ago the comic strip, *Bloom County*, featured a number of the characters watching TV, arguing about whether they should be enjoying the violence on the program, as they did not know whether the content was a fictional movie or the news. It is the purpose of this article to experimentally investigate cognitive and emotional effects related to changing the label ascribed to still photographs, from fictional to real, while keeping the content constant. This research examines how our preconceptions of media content affect our understanding of what we view. Do we have a different method for processing “real” content from fictional? How much of the meaning we derive from media content is driven by bottom-up effects and how much by our top-down expectations of content?

This study is timely and useful for a number of reasons. First, understanding what lies behind viewer reactions, in a culture where viewers react marginally to gratuitous fictional violence in action movies, yet strongly to gruesome accounts of real violence in news content, should be relevant, especially at a time of international conflict. Second, research on how real versus fictional content is perceived should be useful to newsmakers and gatekeepers, making important decisions on the tone and tenor of media coverage. Third, within the broader context of mediated violence research, this study should help us determine how viewer perceptions of content mediate cognitive, attitudinal, and behavioral consequences. Finally, individual differences in how real content is perceived to be could potentially mediate all types of viewer interaction with content genres and media. Perceived realism could influence how seriously viewers are predisposed toward content, and thus what meaning they derive from it

and how they categorize within cognitive and attitudinal frames of reference.

Therefore, we undertake a study of how people cognitively process visual information, based on whether they believe it to be real or fictional. Our review of relevant theory first examines research discussing the perceived reality of media content, justifying the study’s focus on defined reality. Research on the cognitive and emotional effects of defined reality is then reviewed and connected to the literature that examines individual differences in learning from visual information.

Perceived and Defined Reality

The majority of literature focusing on reactions to real versus fictional content falls under perceived reality research. In general, perceived reality research has suggested that more realistic content can lead to larger emotional or behavioral effects (Greenberg & Reeves, 1976; Potter et al., 2002; Wilson et al., 2002). Still, most authors contend that content defined as fictional or real is too simplistic a way of conceptualizing and operationalizing the larger and multidimensional concept of perceived media reality. Differentiating between actuality/factuality and fiction is located in the earliest definitions of media realism (Hall, 2003). Wright et al. (1994) argued that reality and unreality is not a simple dichotomy. Different genres blur this idea—from reality TV, docudramas, and news arguably contain different elements of realness. For instance, Wright et al. (1994) differentiated between factuality—did it really happen—and social realism—are people or events realistic in a taxonomy developed for evaluating the realness in children’s programming and children’s assessment of this. Similarly, Potter (1988) criticized simple dichotomous labels of real or not as lacking a clear conceptual definition, as well as genre labels. Such a simplistic differentiation is limited and problematic, as viewers tend to be more sophisticated and active in how they process realism in content (Hall, 2003).

To this end, Wright et al. (1989) examined the affective and cognitive reactions of children after viewing coverage of the space-shuttle explosion in 1986, and focused on what features of coverage



could influence the children's perception of reality. They differentiated among three factors: factuality ("whether the story or events portrayed really happened or not), social realism (whether the characters, settings, and events portrayed seem typical of, or likely to occur in, the real world) (see also Shapiro & Chock, 2003), and the video style of the production (the degree to which the special productions and editing techniques and unique conventions of the medium are used so that the program seems formally and stylistically typical of commercial entertainment programming and is therefore judged to be synthetic). They suggested that because factuality is often hard to establish in the first place, children ordinarily rely on social realism to judge the reality of a program.

Still, most of these examinations of perceived reality focus on the realistic nature of fictional content, based on the typicality of the content. Even when factuality is included as a component, such as in

Wright et al.'s (1989) model, the authors do not differentiate between content that is defined ahead of time as "real," such as news and content that is a reenactment of something that did occur (a docudrama or historical movie, like Pearl Harbor).

Certainly news is a construction of reality, and not reality itself. Likewise, fiction may be more real to some people's lives than content on the news. Atkin (1983) argues that reality and fantasy is "not a property of the stimulus message, but it is a perception on the part of the receiver" (p. 615; see also Berkowitz & Alioto, 1973; Feshbach, 1976). While related, defined and perceived reality are not the same concepts. It is important for us to differentiate between defined reality, based on the label (or viewers' preconceptions), and perceived reality, based on various content and format cues, determined as viewing occurs. How people approach these fictional and factual genres could generally differ, in that



Subjects in the experiment are led to believe that these two photographs are news pictures. In reality, they are publicity shots from an upcoming movie about a high school band with few resources. Photographs by Jessica Tefft.

people would tend to assume that news content represents something that actually happened, even if influenced by a variety of filters. Moreover, it is possible that individuals will bring a different set of cognitive tools to make meaning of content they perceive as fictional versus content they perceive as real. The focus of our study, therefore, is on defined reality.

Cognitive Responses to Defined Reality

Literature on defined reality examines both the cognitive and emotional effects of reality definitions. We begin with a review of the cognitive effects. Meaning, according to Worth and Gross (1974), is not located solely in the stimulus itself, nor in the viewer. Rather, meaning is based on an interaction between the context of viewing, the viewer, and the stimulus. They suggest that reactions to stimuli are based largely on how audiences define the

nature of the event or how the event is defined for them and that the definition of the event determines the cognitive approach viewers apply to them (see also Zwaan, 1994).

Worth and Gross's seminal piece, "Symbolic Strategies" (1974) is essential to any discussion of defining content realness. The authors argued that how people define an event determines how they cognitively process the content. They distinguished between events that are "natural" and events that are fictional. People assign meaning differently based on whether they believe the communication event (or sign-event, as the authors call it) was produced "for the purpose of 'symbolizing' or communicating" or neither. (p. 27). As the authors asserted "The assessment of events as natural or symbolic determines whether we use an interpretive strategy which we call attribution, or an interpretive strategy which we shall call communicational inference" (p. 27).

For a natural event, because people do not perceive an intent to communicate, they tend to utilize limited cognitive processing, focusing more on the attribution of characteristics of the event to “situational” or enduring factors, or trying to determine what the event is. This limited processing means that viewers simply take the event in and move on, thinking very little about what they just saw. For the news, according to Worth and Gross (1974), viewers would react by making attributions about the nature of the image, how long has the situation been going on for, and who is responsible for the cause or solution of the event. At a basic level, readers/viewers would think less about the meaning of the event, taking the situation as natural and not communicative of deeper significance. Even in mediated versions of real events, such as newscasts, viewers are predisposed to not focus on the authorial intention, rather just what the event shows (Messaris & Gross, 1977).

On the other hand, for symbolic events, since there is a perceived intention to communicate, people try to infer meaning, seeking to determine what the communicator was attempting to convey. This thought process reflects greater idea generation as the viewer tries to make sense of the meaning of the event. Receivers are more likely to think about what the organization of a sign events mean, such as what this object next to that object means. The focus for symbolic or fictional events is on puzzling out the communicative intentions of the author/artist. While attributions seem to focus on the denotative aspects of a message, inferences begin to address compositional meanings and connotative aspects of a message.

More recently, Zwaan (1994) argued that “readers allocated their processing resources according to their expectations about the genre of a text” (p. 920). In essence a genre definition (fact versus fiction) cues different processing strategies. Readers approach a fiction passage assuming more ambiguity, according to Zwaan (1994), and thus, spend more time processing the text, trying to determine the meaning of the passage. Similarly, Strange and Leung (1999) found that causal assessments differed depending on whether readers thought a text passage was fictional or factual. Slater (1990) examined the influence of content label—fiction versus

nonfiction—on beliefs about familiar and unfamiliar groups. He found a crossover interaction in that content labeled as nonfiction had greater impact on beliefs about familiar groups, while the opposite was true for content labeled as fiction. Participants were also much more confident in their beliefs of familiar groups when they viewed content labeled as nonfiction.

While Green and colleagues (Green & Brock, 2000; Green et al., 2006) also argue for differences in the processing of fictional versus factual labeled texts, they found no differences in the persuasive effects of genre label of a text on beliefs about an issue.

This distinction between natural and symbolic events affecting processing begins to explain differences in how people react to graphic images that are found in news versus those found in a fictional context such as a movie. By knowing the nature of the event ahead of time, our brain is prepared to use different strategies for understanding.

Apart from Worth and Gross (1974), researchers have only examined text-based stimuli for cognitive effects. Visuals, such as photographs, may likewise engender cognitive processing differences depending on whether viewers believe the images show actual events or an artist’s recreation of events.

Emotional Responses to Defined Reality

Worth and Gross (1974) stopped at cognitive strategies or effects, and did not discuss emotional reactions to natural and symbolic events. Literature that does examine the emotional effects of differently labeled content focuses mostly on the effects of viewing mediated violence. Cantor and Nathanson (1996) surveyed parents about their children’s reactions to news and fictional content. As children age, they exhibit more fright reactions to news content and fewer fright reactions to fictional content. The definition of the content seems to make a difference. This trend was also seen in Cantor and Sparks (1984), who found that the main reason for these changes is the development of fantasy-reality distinctions. Younger children, they posited, were not as skilled at differentiating fictional and reality

content, but as they develop this content distinction, news became scarier, since it was defined as something real.

Several studies manipulated whether viewers thought the mediated violence was of something real (news) or of fictional content (movies). Geen (1975) showed participants a videotaped fight scene that varied in how it was labeled—real or fiction, to examine emotional responses. The results showed that the “real” video was more arousing, as measured by skin conductance and self-report. In addition, participants who viewed the real condition tended to be more punitive to a confederate than those viewing the other conditions (fiction or control). The effects of the content label were strongest when confederates had previously attacked viewers with electric shocks. Similar results were found by Berkowitz and Alioto (1973), Feshbach (1972), Thomas and Tell (1974), Sawin (1981) and Atkin (1983). Thomas and Tell (1974) summarize these studies when they state “. . . exposure to real violence may be a more potent elicitor of aggressive behavior than fantasy violence, especially after provocation” (p. 159).

Viewer Predispositions and Individual Differences

Cronbach and Snow (1977; Snow, 1989) argued that it is important to examine how individual differences, including what they call aptitudes, which include individual differences in personality and learning styles as well as abilities, interact with tasks to gain a better understanding of how people learn. There are a variety of individual differences including age, gender, intelligence, temperament, and personality that affect how people process television (Miron, Bryant, & Zillmann, 2001). Johnston (1995) provided evidence that a child’s viewing motivations can affect cognitive and affective responses to horror films, in both the positive and negative direction. As he suggested, “We cannot assume equivalent processes and responses by all adolescent viewers” (p. 523). One important individual difference related to processing of visual media is a person’s predisposition for learning from visual information, the visualizing cognitive style. Cognitive styles present an individual’s typical and consistent approach to organizing and processing information, distinct from specific strategies (Jackson &

Lawty-Jones, 1995; Jonassen & Grabowski, 1993; Riding et al., 1995; Sadler-Smith, 1996).

Specifically, a person with a visualizing style is image-oriented, prefers to have someone show them how to do things, and enjoys visual games such as jigsaw puzzles. Furthermore, because visualizers are more image-oriented, they have greater fluency with illustrations, understanding their subtleties (Jonassen & Grabowski, 1993; Riding & Ashmore, 1980). Current thinking suggests visualizing and verbalizing are distinct concepts (Antonietti & Giorgetti, 1998; Green & Schroeder, 1990; Kirby, Moore & Schofield, 1988; Parrott, 1986; Schroeder, 1989) and not opposite ends of the same continuum (Richardson, 1977). A person might prefer to learn from both words and visuals (i.e., be a visual learner and a verbal learner) or neither. This article focuses solely on the visualizer concepts, for reasons that will be made clear later.

Many studies demonstrate, not surprisingly, that visualizers learn better when information is in a visual form (Jonassen & Grabowski, 1993). For example, Marks (1973) found that people who were high visualizers are more accurate in recall of information contained in 15 color pictures than people who were low visualizers. Similarly, Riding and Ashmore (1980) and Casey et al. (1991) showed that the visual learners do better on learning tasks when information was presented in pictorial form or when the task was visual in nature, such as redrawing a figure they had seen.

More recently, Mendelson (2004 and Mendelson & Thorson, 2004) demonstrated that only a person’s visualizer level was a significant factor when the task was completely visual (i.e., no text present), while a person’s verbalizer level was only a factor when the task was largely verbal (i.e., learning from a newspaper). Since our study focuses on images, only the visualizer concept is included.

Rationale and Hypotheses

The previous literature leads into several hypotheses and research questions on the connections between defined reality, cognitive and emotional responses to it, and viewer predispositions.

Cognitive Effects

The work of Worth and Gross (1974), Zwaan (1994) and others suggests that people will process information differently if they believe it represents fiction or reality. In this case, the fictional label should lead to increased cognitive processing in terms of more thoughts generated for fictional content than for content labeled as "real," because viewers will believe there is some intent by the artist to communicate meaning and/or because the images are viewed to be more ambiguous. In addition, photographs labeled as fictional should be perceived as more meaningful than those labeled as real.

H1: Participants will list more thoughts in response to photographs labeled as fictional than to photographs labeled as news.

H2: Participants will rate fictional images as more meaningful than news images.

It is likely that those people who are highly visual should be even more sensitive to these manipulations, such that an interaction should appear for the visualizer scale and the real-fiction manipulation. High visualizers will respond most strongly to photographs labeled as fictional, since they are predisposed for thinking about the meaning of images. This will be manifest through the number of ideas they list about the images compared to low visualizers.

H3: The visualizing cognitive style will interact with the photo label, such that high visualizers will list more thoughts to fictional images than low visualizers.

One research question focuses on the perceived newness of the information depicted depending on the defined reality of the photographs.

RQ1: Will people differ in their judgments of content novelty depending on the label?

Emotional Effects

Based on the literature on effects of real versus fictional violent content on emotional and behavior responses, content labeled as real should lead to increased emotional response. Participants will mostly be more aroused viewing the photographs labeled as news and find these images more active or emotional.

H4: Participants will report feeling more excited when viewing photographs labeled as real than when viewing those labeled as fictional.

H5: Participants will rate real/news images as more active than fictional images.

It is likely that those people who are highly visual should respond more positively to fiction images since because these images require more thought to interpret, a skill at which high visualizers excel. This will be manifest through their liking of the fictional photographs compared to low visualizers.

H6: The visualizing cognitive style will interact with the photo label, such that high visualizers will report (a) liking and (b) feeling happier about fictional images better than low visualizers.

Method

Independent Variables

To test these hypotheses and research question, a 2 (real vs. fiction label) \times 2 (high vs. low visualizer) \times 2 (picture topic: high school marching band and war) mixed design experiment was conducted. The picture topic was manipulated by having photographs depicting a local marching band and photographs depicting the war in Bosnia. The topic was a within-subject variable. There were two photographs for each topic. Each person thus saw and reacted to a total of four photographs each. The photos were selected from photo stories that had been published in newspapers from areas outside the location of the study. None of the participants reported having seen any of the photographs prior to the study.

The label variable was a between-subjects variable and was manipulated by telling participants that the photographs were either stills from a fiction movie, and that the people in the images were actors; or that the photographs were news photographs showing "real" people. The fiction manipulations said:

—The first two photographs are shots from an upcoming movie on an urban high school band that succeeds with few resources. The people in the photographs are actors.

–The photographs on the next page are shots from an upcoming Steven Spielberg movie on the war in Bosnia. The people in the photograph are actors.

The real manipulations said:

–The first two photographs are news photographs of a local high school band in Washington, D.C. that succeeds with few resources. The people in the photographs are the students and the band director.

–The photographs on the next page are news photographs from the war in Bosnia. The people in the photograph are civilians.

Visualizing cognitive style, a between-subject variable, was measured using a scale developed by Kirby et al. (1988). The visualizer style is measured by 10 Likert-type items, ranging from 1–5. Half of the items are reverse coded. The mean score of the visualizer scale was 23.48 (on a scale from 10–50, with lower scores meaning more visual; Cronbach's $\alpha = .69$).

Dependent Measures

To measure the cognitive reaction to the photographs, a thought-listing technique was used (Mendelson & Thorson, 2003; Shapiro, 1994). After each photograph was a series of numbered boxes. Participants were told to write down everything that came to mind while looking at the photograph. They were instructed to write one idea per box. The total number of items listed was used as a measure for cognitive reaction.

To measure emotional responses to the photographs, semantic differential (7 point) scales based on the Self-Assessment Manikins were utilized (Hodes, Cook, & Lang, 1985). Participants rated each of the photographs. These scales measured aspects of emotional response: valance reaction (happy vs. sad) and arousal (excited vs. calm). Participants also evaluated each of the photographs on a series of perceptual scales (Mendelson, 2004). These scales measured the perceived activity of the images (active vs. calm and emotional vs. unemotional; $r = .35$, $p = .000$); the meaningfulness of the images (interesting vs. uninteresting and meaningful vs. not meaningful; $r = .57$,

$p = .000$); liking of the images (pleasing vs. displeasing and like it vs. dislike it; $r = .53$, $p = .000$); and novelty of the images (surprising vs. unsurprising and atypical vs. typical; $r = .36$, $p = .000$). Finally, the fiction vs. real manipulation was verified using two items: realistic vs. not realistic and natural vs. artificial ($r = .76$, $p = .000$).

Procedures

One hundred fifty-seven students (30% men, 70% women; 57% were freshmen, 15% sophomores; 48% in the news conditions, 52% in the fiction condition) participated in this study in exchange for extra credit in an introductory mass communications course at a large, East Coast university. The experiment was embedded in a larger survey on an unrelated topic. The surveys were randomly distributed to the class. The first several pages of the survey were identical, so it was not likely students would notice differences in the surveys. The only difference between the surveys was the wording of the fiction vs. real manipulation. The surveys were conducted in line with the university's Institutional Review Boards standards for human subjects research.

Results

Manipulation Check

To verify the manipulation, a one-way, between-subjects ANOVA (real vs. fiction label) with the realistic scale as the dependent variable. Results showed that participants who viewed the "real" images (mean = 2.5; lower values means more real; higher values mean more artificial) rated them as more realistic than those who saw the "fiction" images (2.7 ; $F(1,155) = 2.61$, $p < .05$). Thus, the manipulation was successful.

Cognitive Reactions

To test the effect of the manipulation on thoughts generated, a three-way ANOVA 2 (real vs. fiction label) \times 2 (picture topic: high school marching band and war) vs. 2 (high vs. low visualizer, based on a median split) was conducted with the total number of

thoughts listed for the photographs as the dependent variable. A significant main effect showed that, as predicted, the participants seeing the "fiction" version (mean = 6.2) generated more thoughts in reaction to the images than those seeing the "real" version (mean = 5.5; $F(1,153) = 2.71, p < .05$). In addition, there was a significant main effect for the visualizer scale, such that high visualizers (mean = 6.2) generated more thoughts about the photographs than low visualizers (mean = 5.5; $F(1,153) = 2.79, p < .05$).

Lastly, there was also a main effect of picture topic, such that participants generated more thoughts about marching band images (mean = 6.0) than the war ones (mean = 5.7; $F(1,153) = 8.27, p < .004$). There were no significant interactions between any of the independent variables. Thus, H1 was supported, while H3 was not. We examined how people rated the meaningfulness of the images. There were only main effects for picture topic and for visualizing. For topic ($F(1,153) = 168.23; p < .000$), war images (mean = 2.5) were rated as more meaningful than the marching band images (mean = 3.8). For visualizing ($F(1,153) = 2.91; p < .07$), high visualizers (mean = 3.1) found all the images to be more meaningful than the low visualizers did (mean = 3.3). H2 was not supported.

In terms of novelty, there was a significant main effect of the real-fiction manipulation ($F(1,153) = 2.79; p < .049$), such that people rated the real images as more novel (mean = 4.0) than the fictional images (mean = 4.2). There was also a significant main effect due to picture topic ($F(1,153) = 34.79; p < .01$), with the marching band images (mean = 4.4) being rated as less novel than the war images (mean = 3.8). There were two significant two-way interactions. First, topic interacted with the photo label variable ($F(1,153) = 5.45; p < .02$), indicating that while there was no difference between real and fiction the war images on novelty ratings, the real marching band images were rated as more novel (mean = 4.2) than fictional ones (mean = 4.6). The picture label variable also interacted with a person's visualizing level ($F(1,153) = 6.08; p < .02$). High visualizers did not rate the novelty of real and fiction photos differently, while low visualizers rated the fiction images as less novel (mean = 4.3) than the real images (mean = 3.8).

Emotional Responses

To test the effects of the manipulations on participants' emotional responses, three-way ANOVAs 2 (real vs. fiction label) \times 2 (picture topic: high school marching band and war) vs. 2 (high vs. low visualizer, based on a median split) were conducted on each of the SAM scales: excited-calm and happy-sad.

For the excited-calm scale, there was no significant main effect for the real-fiction manipulation. There was a significant main effect for the visualizer scale ($F(1,152) = 1.63, p < .10$), such that high visualizers felt calmer (mean = 4.8) when viewing all the photographs than low visualizers (mean = 4.5). There was a significant main effect of topic ($F(1,152) = 16.33; p < .000$), such that people reported being more excited when viewing the marching band pictures (mean = 4.4) than the war pictures (mean = 4.9). Finally, there was one significant interaction. The topic variable interacted with the real-fiction manipulation ($F(1,152) = 1.6; p < .10$). There was no difference between the excitement ratings for the war pictures between those labeled as fiction and those labeled as real. However, there was a difference for the marching bands ones, with real images rated as more exciting (mean = 4.2) than fictional images (mean = 4.6). H4 was partially supported.

While there was no significant main effect due to the real-fiction manipulation or the visualizer scale on the activity scale, there was a significant main effect due to topic ($F(1,153) = 4.97; p < .006$), such that the marching band photos were rated as more active (mean = 2.9) than the war photos (mean = 3.2). H5 was not supported.

In terms of the liking ratings, there was a significant main effect of visualizing ($F(1,153) = 5.3; p < .04$), such that high visualizers (mean = 4.1) liked all the images better than low visualizers (mean = 4.3). Additionally, a significant main effect of topic ($F(1,153) = 101.27; p < .000$) revealed that the marching band photos (mean = 3.6) were better liked than war photos (mean = 4.8). Finally, a significant interaction was noted between the photos label and the visualizing level ($F(1,153) = 3.70; p < .08$). While there was no difference on liking for real photos between high and low visualizers (mean = 4.2), these two

groups disagreed on their preferences for fictional images. High visualizers (mean = 4.0) liked images labeled as fiction much more than low visualizers (mean = 4.5). H6a was supported.

For the happy-sad scale, there was no main effect for either the real-fiction manipulation or the visualizer scale. Not surprisingly, there was a significant main effect for topic ($F(1,152) = 147.76, p < .000$), such that participants felt happier when they viewed the marching band photos (mean = 2.9, low score is happy) than the war ones (mean = 4.4). There were no interactions among any of the three independent variables. H6b was not supported.

Discussion

As stated earlier, the purpose of this study was to examine cognitive and emotional consequences of manipulating real and fictional labels of photographs. Previous literature suggested that content which readers thought was fictional would spark greater thinking, especially thoughts about the meaning of the text, whereas factual texts do not lead to the same examination of meaning. At the same time, previous literature suggested that people would respond more strongly to content they thought was real rather than fictional.

The results of this study demonstrate that the definition of an event does affect how people respond to still photographs. Manipulating whether people thought images were fiction, portraying actors, or real, portraying actual news subjects, changed the meaning people received from the images. Foremost, people thought more about images that they thought were fictional. Concurrently with the work of Worth and Gross (1974), which argued that the definition of a communication event determines subsequent cognitive processing, this research reveals that when individuals believe that a communication event is fictional or symbolic, they are more likely to think about the message. It is likely that the specificity of the "real" photos led people to unconsciously limit the connections they make, while the fictional photos led people to wander to more disparate areas. As Worth and Gross (1974) argued when a communication event is fictional, people look for deeper meanings.

Furthermore, there were some indications that the definition of the event also affected perceptual and emotional responses, which fits with research on the impact of violent media content depending on perceptions of realness. This research consistently showed that people respond more strongly to content they believe is real. Our study showed that, at least for the marching band images, participants felt more excited when they viewed the real images than when they viewed the fictional ones. People rated the real images as more novel than fictional ones. This relationship could be investigated further in the reality TV context, which routinely posits "real" people in situations viewers could only imagine themselves in, thus presenting a combination of the real and fictional.

In addition, this research demonstrated that a person's orientation for visual learning affects how photographs are processed, consistent with the findings of Mendelson (2004). People who are predisposed to learn from visual messages respond quite differently to photographs than those less visually oriented. To begin with, high visualizers listed more ideas about the images and found all images more meaningful, regardless of their label. Further, high visualizers reported liking the fictional images much more than the low visualizers did. This fits with the idea that high visualizers are predisposed to look for meaning in images, and since fictional images demand more interpretation, it makes sense that they would prefer these images. Also, the results demonstrate that less visually oriented people do not make the same content connections between images they thought were real and those they thought were fictional. Low visualizers rated fiction images as more typical than the same images labeled as real. This difference was not seen for high visualizers. In terms of novelty ratings of content, the label does not seem to affect their response.

In order to strengthen the present findings, future research needs to examine several issues. First, a broader range of content needs to be examined. More importantly, this study only utilized self-report measures. Perhaps the different responses based on the label of the images occurs once controlled or a higher level of processing takes place, while the immediate response to media content is more

automatic and based solely on the content (Bargh, 1984; Cowan, 1995). Future research needs to examine real-time processing to determine if content labels can affect automatic processes, such as psychophysiological responses, including heart rate and skin conductance.

Finally, future research needs to examine attention measures as well, such whether there are differences in how long people spend studying image labels as fiction or real. It would seem that people would spend more time on content they believe to be fictional, since they would be oriented toward interpreting the message of the photograph.

While it does seem that "real" messages were less cognitively engaging, they were more emotionally engaging. The link between cognitive and emotional enjoyment remains unclear. It is possible that when realistic content is more emotionally powerful, this would preclude cognitive processing of meaning. And conversely, because fictional content is less emotionally engaging, individuals might be able to think more deeply about it. Perhaps this is the advantage of fictional content. Fiction facilitates the confrontation of topics that are more sensitive or painful. As Feshbach (1976) argues, fantasy content can allow the viewers the opportunity for "new insights," perhaps because it is less emotionally arousing (p. 84).

In the end, this research supports the notion that visuals are inherently ambiguous and polysemous (Barthes, 1977). Much of the meaning people receive from photographs, and thus the reactions, depends largely on how they are viewed or defined, rather than any factors inherent within the photographs. Viewing context and viewer predispositions are as significant as the content of photographs in determining what photographs "mean." As Worth and Gross (1974) suggested, meaning is not only a property of the stimulus. Clearly, it is the interaction of these elements that must be examined to understand the nature of photographs.

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