

ORIGINAL ARTICLE

News Images, Race, and Attribution in the Wake of Hurricane Katrina

Eran N. Ben-Porath¹ & Lee K. Shaker²

1 SSRS/Social Science Research Solutions, 53 W. Baltimore Pike, Media, PA 19063, USA

2 Department of Politics, Princeton University, Princeton, NJ 08544, USA

This study looks at the effect of news images and race on the attribution of responsibility for the consequences of Hurricane Katrina. Participants, Black and White, read the same news story about the hurricane and its aftermath, manipulated to include images of White victims, Black victims, or no images at all. Participants were then asked who they felt was responsible for the humanitarian disaster after the storm. White respondents expressed less sense of government responsibility when the story included victims' images. For Black respondents this effect did not occur. Images did not affect attribution of responsibility to New Orleans' residents themselves. These findings are interpreted to support the expectations of framing theory with the images serving as episodic framing mechanisms.

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In the aftermath of Hurricane Katrina, race played a defining role in the public reckoning of the disaster. This study explores the relationship between the composition of images appearing in news stories, race, and attribution of responsibility with the events surrounding Katrina as the backdrop. In the context of this racially charged disaster, we seek to extend the existing research on the mechanisms underlying attribution of responsibility by focusing on the differences between Black and White U.S. citizens' attribution patterns. The two fundamental concerns central to this undertaking are: Do images of victims make people more or less likely to believe the government was at fault for the human tragedy that followed the storm? And, do images affect White and Black people differently?

News coverage is at the core of this discussion because it is the primary source of information that people have as distant events unfold. Prior communication research clearly suggests that the way the news is told broadly affects attribution of

Corresponding author: Eran N. Ben-Porath; e-mail: ebenporath@ssrs.com

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responsibility by the audience. From this body of work, we draw upon the studies of news framing and attribution (e.g., Iyengar, 1991; Iyengar & Kinder, 1987) and previous research on news images and framing (e.g., Mendelson, 1999; Messaris & Abraham, 2001). To these, we add the studies investigating the relationship between race, news coverage, and attribution patterns (e.g., Gandy & Baron, 1998; Gilens, 1996; Hannah & Cafferty, 2006).

This study employs a responsibility framing approach, which means it is centered on “how the description of events influences the determination of responsibility for those events” (Hannah & Cafferty, 2006, p. 2995). Existing research in this tradition (e.g., Hannah & Cafferty, 2006; Iyengar, 1990, 1991; Keum et al., 2005) finds that subtle differences in media messages affect people’s attribution of responsibility for social consequences. Race enters this theoretical framework in two possible ways. The first, associated with the related field of priming research, predicts that racial cues in news stories make race more salient in individuals’ determination of responsibility (e.g., Dixon & Azocar, 2007). Second, there is the possibility of disparate patterns of attribution for Blacks and Whites, driven by the connection of their social group to the question at hand (e.g., Kaiser, Eccleston, & Hagiwara, 2008). Considering the racial theme that marked the coverage of Katrina (e.g., Voorhees, Vick, & Perkins, 2007), the questions we ask, and our findings, contribute to the expanding body of research focused on the social consequences of Hurricane Katrina and, specifically, on the part the news media played in interpreting the tragic occurrences in the Gulf (Belle, 2006; Faux & Kim, 2006; Lee & Gandy, 2006; Sommers, Apfelbaum, Dukes, Toosi, & Wang, 2006; Tierney, Bevc, & Kullgowski, 2006).

This article begins with an overview of its theoretical underpinnings. Informed by the strands of theory mentioned above and by previous research, we formulate hypotheses predicting the possible effects of news images appearing in media coverage of Hurricane Katrina. We then test these hypotheses through an experimental study that employs a representative sample of adult Americans, White and Black. Our findings speak to the power of images in determining the audience’s processing of a news story, while indicating that group identity, such as race, can moderate the outcome. The concluding section of the article discusses the importance and contribution of these findings.

Race, media framing, and attribution of responsibility

News organizations often tend to “personalize news stories of more complicated issues in order to attract audience attention” (Davis, 1995, p. 131). Iyengar (1987, 1991) broadly distinguishes between two types, or frames, of news coverage—episodic and thematic—that shape the processing of a news story and the ensuing attribution patterns. This line of research finds that episodically framed news stories, in which problems are depicted through accounts of the circumstances of specific people, lead readers to ascribe less responsibility for these problems to structural factors, namely the government, and more responsibility to the affected persons. Thematic framing, in

which news stories discuss problems in terms of general facts and figures (e.g., the state of the economy when discussing poverty), leads the audience to ascribe more blame to external, structural, causes and less responsibility to individual or dispositional factors.

There is an ongoing debate within the research community as to the underlying mechanisms that connect types of media coverage to individuals' attitudes about responsibility (see McGraw, 2000; Nelson, Oxley, & Clawson, 1997). One prominent explanation is explored in research on the fundamental attribution error. This theory maintains that people tend "to attribute another person's behavior to his or her own dispositional qualities, rather than to situational factors" (Fiske & Taylor, 1991, p. 67). In the realm of media effects, the fundamental attribution error intersects with the question of accessibility. Tversky and Kahneman (1973) demonstrate that people interpret events on the basis of the information that is most cognitively accessible to them (the availability heuristic). This predicts that when observers, that is, the readers, encounter a news account stressing the part played by individuals, they are likely to interpret the story with those individuals in mind. Consequently, these readers will tend to attribute responsibility for the occurrence discussed in the story to persons rather than to structural forces.

When considering media framing and the attribution of responsibility in the wake of Katrina, we may anticipate similar outcomes. If news accounts utilize thematic frames that center on the sheer scale of the disaster and its sources, the audience would be more likely to evaluate the disaster in terms of structural forces external to the victims. However, if stories employ an episodic frame and focus on the catastrophic outcomes of the storm through the lens of individuals and their hardships, the audience will likely tend to find situational factors such as the actions of the government less of a cause for these outcomes. Studying the media coverage of Hurricane Katrina, Belle (2006) concludes: "The vivid, episodic coverage of Hurricane Katrina, its victims most often Black, may well have had such an effect" (p. 155).

Race and attribution

The actor–observer hypothesis (Jones & Nisbett, 1971; Stephan, 1977) holds that "actors tend to attribute their behavior to stimuli inherent in the situation while observers tend to attribute to stable dispositions of the actor" (Jones & Nisbett, 1971, p. 93). Extended to group theory, the actor–observer hypothesis maintains that people tend to attribute the acts of ingroup members to situational circumstances, while the behavior of outgroup members is more likely to be attributed to dispositional factors, particularly factors that are consistent with pre-existing stereotypes of the outgroup (Nisbett & Ross, 1980). Therefore, if news stories center on outgroup members and circumstances that might be interpreted as stereotypical, audience members (of the ingroup) will relate these circumstances to some factor inherent to the outgroup. This study looks at race as the parameter by which ingroup and outgroup membership is defined.

Previous research indicates that that when race is made salient through press coverage of a social problem, White audience members tend to ascribe the causes of

this problem to dispositional factors of those affected. In a broad content analysis of media coverage, Gandy and Baron (1998) find that stories about poor Blacks are more often framed episodically than thematically. They contend that this leads to a higher likelihood that Blacks themselves will be faulted for their socioeconomic hardships instead of attributing these difficulties to the structural disadvantages that Blacks face. Gilens (1996) traces Americans' distrust of welfare to an overrepresentation of Blacks among welfare recipients depicted in the media.

This is the intersection of the framing approach to attribution of responsibility and the research on racial priming. Even though these two theories assume a somewhat different basis for media effects (see Scheufele, 2000; Weaver, 2007), both would predict that racial cues in media content can impact a person's evaluative process by either increasing the salience of race in making evaluations (such as attribution) as priming theory holds or in activating particular schemas tied to one's racial attitudes as framing theory maintains. A vast body of research illustrates how racial cues affect memory and evaluations of news stories, particularly for White Americans. For example, the cognitive linkage many Whites have between crime and race increases Whites' likelihood to falsely recall the race of criminals in news stories as Black (Dixon, 2006; Oliver, 1999; Oliver & Fonash, 2002). This proclivity to employ stereotypes in weighing social issues extends into the realm of responsibility for social problems. Experimental research demonstrates that when (White) Americans believe that those affected by a social problem are Black they are more likely to attribute this problem to dispositional factors than when they believe those affected are White (e.g., Domke, 2001; Gorham, 2006; Iyengar, 1990; McDonald, 2001). Dixon and Azocar (2007) find that by merely discussing a racialized and stereotyped issue such as crime, television news reports can reduce viewers' sense that there are structural limitations blocking Blacks' success in society.

Beliefs about race and responsibility may vary with the respondent's own racial affiliation. Blacks are more likely than Whites to suggest that racism is a cause of poverty (Schuman, Steeh, Bobo, & Krysan, 1997). Whites are more likely than Blacks to find fault in individuals' own actions when explaining poverty. Similarly, Schuman et al. observe a consistent and overwhelming discrepancy between racial groups' beliefs on the question of effort (or lack thereof) as an explanation for Blacks' social circumstances. Hochschild (1995) finds that Whites, in general, tend to think that Blacks have a large share of responsibility for their social problems, while Blacks are also likely to express this sentiment, albeit to a lesser degree. At the same time, she finds that Blacks are much more likely than Whites to think the government is deliberately causing some of the social problems of urban America (see also Sniderman & Piazza, 2002).

In view of the literature on the racial differences in attribution, and in light of the racial underpinning of public opinion in the case of Hurricane Katrina, we measure the differences in the effects of news images separately for Black and White audiences. Our expectation for a between-race difference in responsibility framing is consistent with theory concerning attitude strength and opinion formation (e.g., Fazio, 1995;

Krosnick & Petty, 1995; Zaller, 1992). This line of research finds that issue salience and accessibility can lead to a resistance to attitude change. Issue publics, those groups within a population who find a given issue of particular importance, are more resistant to attitude change than the public as a whole (Krosnick, 1990; Krosnick & Telhami, 1995). Given the visibility of Black victims in media coverage and the generally racialized tone of the debate surrounding Katrina, it is conceivable that racial identity may define an issue public when considering political reaction to the disaster. In turn, the unique circumstances of the Katrina disaster could have prompted disparate attribution patterns among White and Black Americans and preliminary research suggests that this did happen (e.g., Murray, 2005; Pew Research Center, 2005). To this, we add the possibility that blacks' attitudes about Katrina would be less affected by media coverage.

News images as framing mechanisms

Visual images can be powerful framing devices. In their overview of the research on images and framing, Messaris and Abraham (2001) tie the power of images to three distinctive properties: analogical quality, indexicality, and a lack of propositional syntax. Analogical quality means that unlike words, which represent reality by relying on social conventions, the relationship between images and their meanings are tied by their similarity to the object they represent. Similarly, the indexicality of photographs refers to their association with an authentic representation of the object they reproduce, increasing the likelihood that viewers would consider them a true reflection of reality. Lastly, images' lack of explicit causal propositions means that viewers would be less likely to reject their implicit meanings. As a result, propositions instilled in images could be highly effective.

Entman (1991) maintains that: "News frames are constructed from and embodied in the key words, metaphors, concepts, symbols, and visual images emphasized in a news narrative" (p. 7). Images are a visual tool that can attract the audience's attention and affect their interpretation of the news itself and the social issues to which they relate (see Gibson, 2003 for a review). On the basis of this reasoning, Mendelson (1999) applies Iyengar's categories of thematic and episodic framing to the impact of images: "It is reasonable to conclude that pictures should play an important role in affecting a viewer's attributions" (p. 180).¹ The logic behind this proposition is that images lead respondents to process written information with certain attributes of the story that are more salient in their mind. Since people tend to recall pictures better than words, they help create mental models by offering a concrete representation of the text in the readers' cognition (Paivio & Csapo, 1973). By providing audiences with vivid exemplars of victims, news images may steer the audience's attention away from a broader structural context and toward the question of individuals' actions. On this basis, we hypothesize that exposure to images of individual victims in the coverage of Hurricane Katrina should lead to a lessened sense of government accountability for the tragedies wrought by the natural disaster.

Images may call attention not only to the nature of an event (e.g., episodic or thematic) but also to specific attributes of the people appearing in photos, such as their ethnicity. The race of people appearing in news images can temporarily increase the viewers' sensitivity to their own ethnicity (Forehand & Deshpandé, 2001), thus affecting their evaluations of the issue described in a news account. Along these lines, racial priming research finds that the mere inclusion of racially identifiable images in a news story can activate Whites' stereotypes concerning Blacks and leads to more negative evaluations of persons involved in a story (Domke, 2001; Gilliam & Iyengar, 2000; Peffley, Shields, & Williams, 1996), or lead White respondents to associate Blacks with social problems such as crime (Abraham & Appiah, 2006; Messaris & Abraham, 2001). This study tests whether racial cues can affect the activation of episodic framing for outgroup members. In other words, we examine whether people will be less likely to ascribe responsibility for the disaster to the government if the person depicted in the news image is of a different race than they themselves are.

The experimental study

Hypotheses

- H1a: Blacks will hold the government more responsible for the human tragedy that followed Hurricane Katrina than Whites.
- H1b: Blacks will hold the residents of New Orleans less responsible than Whites.
- H2: Whites reading news stories that include images of Katrina victims will attribute less responsibility for the aftermath of the storm to the government than those reading stories without images.
- H3: Black respondents will be less affected than Whites by the inclusion of images of victims in the news stories than White victims.
- H4a: News accounts including images of Black victims will lead White respondents to attribute less responsibility to the federal government for the aftermath of the storm than accounts with images of White victims.
- H4b: News accounts including images of Black victims will lead White respondents to attribute more responsibility to the residents of New Orleans.
- H5a: News accounts including images of Black victims will lead Black respondents to attribute more responsibility to the federal government for the aftermath of the storm than accounts with images of White victims.
- H5b: News accounts including images of Black victims will lead Black respondents to attribute less responsibility to the residents of New Orleans.

Method

In order to assess the effects of news images we conducted an experimental study with a representative sample of the adult U.S. population. The experiment was carried

Table 1 Demographic Background by Experimental Condition

Experimental Condition	Black-Individual		Black-Group		White-Individual		White-Group		No Image	
	White	Black	White	Black	White	Black	White	Black	White	Black
Respondent race	65	46	55	59	48	74	56	50	28	23
<i>N</i>										
Democrats (%)	49.2	78.3	41.2	78.0	62.5	85.1	53.6	80.0	50.0	73.9
Republicans (%)	46.2	15.2	52.7	16.9	29.2	8.1	39.3	8.0	42.9	4.3
Age (mean)	50.4	46.5	49.8	43.3	51.7	45.5	44.8	49.4	50.1	45.2
Female (%)	46.2	73.9	43.6	52.5	58.3	50.0	48.2	62.0	50.0	34.8

Note: Median education in all groups for both races was “some college.”

out with the support of the Time-sharing Experiments for the Social Sciences project (TESS). TESS, in collaboration with Knowledge Networks, recruits random samples from the general population and administers experimental studies online through either personal-computers or WebTV devices.²

Participants

The study involved samples of Black ($n = 252$) and White ($n = 252$) respondents randomly assigned to one of five experimental conditions. Table 1 provides the demographic make-up of each group.

Procedure

In the strictly thematic condition (*no image*), respondents simply read a news story, attributed to the Associated Press, which provided background information on Katrina and the ensuing disaster, devoid of any content concerning dispositional factors of those affected by the storm or evaluative statements as to who was responsible for the outcomes.³ The other respondents were assigned to one of four photo conditions in which a picture was digitally manipulated to vary both the race and the number of people in the shot. The race of victims was manipulated so that photos included either Whites or Blacks, comparable in every respect other than race.⁴ In two of the experimental conditions, the story was accompanied by an image of an individual (Black or White) carrying a large bag as he walks on a New Orleans highway. Each of these images had a caption stating: “Robin Stevens (36) of New Orleans lost his home in the wake of Hurricane Katrina.” The study also included two photo conditions that mixed thematic and episodic elements. These conditions were operationalized by manipulating the picture so that the individual was joined by a small group of same-race victims on the highway with various luggage in hand, showing wider shots of devastation. These photos were captioned with the sentence: “More than 300,000 people had to leave their homes in the wake of Hurricane Katrina.” Both the image and the caption were intended to lead respondents into considering the victims as a group, which could discourage the inclination to ascribe individual agency as an explanation for the victims’ action (see O’Laughlin & Malle,

2002). At the same time, this visual component could still lead respondents to consider the group as a handful of individuals from a given ethnic group.

After reading the purported AP story, respondents answered questions about their views regarding responsibility for the disastrous aftermath of Katrina. These questions were informed by polls conducted immediately after the storm and adapted to resemble questions used in previous studies of attribution (e.g., Pew Research Center, 2005), Americans' explanation for poverty (e.g., Kluegel, 1987) and on race and attribution (e.g., McDonald, 2001; Sniderman, Piazza, Tetlock, & Kendrick, 1991⁵). This allowed us to construct composite scales that tapped the particular actions of the government and New Orleans' residents by pairing the Pew questions with items about individuals' effort as an explanation for their circumstances (see Appendix B for all questions). We adapted these lines of questioning to the particular situation at hand and added other questions specifically targeting the question of government and individual responsibility for the circumstances following Katrina.

The questions began with an open-ended item: "How could the consequences of Hurricane Katrina in New Orleans, such as loss of life, damage to property, and displacement, have been avoided?" Respondents were then asked for their levels of agreement (on a 6-point scale) with statements that either suggested the government was to blame for the disaster or that New Orleans' residents were responsible. In addition, respondents were asked to try and divide responsibility between the federal government, local authorities in New Orleans, and the people in New Orleans by allocating the percentage of responsibility they thought each party shared. Throughout the questionnaire, the image that was featured in the news story appeared on top of the screen to keep it salient as the respondents answered the questions.

Measures

From the responses to the closed-ended items, we constructed two scales: government-responsibility and resident-responsibility, each composed of six items. Several steps were taken to establish the validity and reliability of the two scales. (a) Internal consistency was measured using Cronbach's α : both scales were found highly reliable: government responsibility: $\alpha = .87$; resident-responsibility: $\alpha = .89$; (b) confirmatory factor analysis (with Varimax rotation) found two latent factors underlying the questions along the anticipated lines (see Appendix C), with the government-responsibility scale appearing more conceptually distinct and internally consistent than the resident-responsibility-scale; (c) nomological validity: each scale was positively correlated with the percentage of responsibility attributed to its corresponding actor.⁶

The effect of the news images was tested in three different ways: (a) scores on the "government-responsibility" scale and the "resident-responsibility" scale; (b) the percentage of blame attributed to the federal government and to the residents of New Orleans; (c) the likelihood of mentioning the responsibility of the government or the residents in response to the open-ended question.⁷ The responses of White respondents and Black respondents are reported separately below.

Differences between each of the five conditions were assessed through analysis of covariance with multiple comparisons. Party identification (on a 7-point scale) and education (on a 6-point scale) were the covariates included in the models below in order to increase precision in the measurement. Where multiple comparisons were conducted, significance tests also controlled for Type I error familywise, meaning significance (at the 95% level) was tested not only for each comparison but also for all the comparisons conducted on one factor (Klockars & Sax, 1986). This minimizes the risk that significant findings are found by chance as a result of multiple testing. The overall differences between respondents who were exposed to images of victims (irrespective of the particular image) and those who saw no images at all were assessed through OLS regression in which the presence/absence of images was treated as a dichotomous variable. The likelihood of attributing blame in the open-ended questionnaire was measured using logistic regression.

Results

H1a: Blacks will hold the government more responsible for the human tragedy that followed Hurricane Katrina than Whites.

H1b: Blacks will hold the residents of New Orleans less responsible than Whites.

Consistent with available polling data, there was a clear racial divide in the degree of attribution of responsibility to the federal government among respondents. Black respondents scored higher on the government-responsibility scale ($M = 4.83$, $SE = 0.07$) than Whites ($M = 4.30$, $SE = 0.07$), $F(1,499) = 29.33$, $p < .001$, $\eta^2 = .07$. Similarly, Blacks attributed a higher percentage of the blame for Katrina's aftermath to the government in Washington (Blacks: $M = 49.81$, $SE = 1.54$; Whites: $M = 37.03$, $SE = 1.54$), $F(1,490) = 30.43$, $p < .001$, $\eta^2 = .08$.

Differences were also found concerning the responsibility of New Orleans residents. On the resident-responsibility scale, Whites ($M = 3.47$, $SE = 0.06$), scored significantly higher than Blacks ($M = 2.78$, $SE = 0.06$), $F(1,499) = 52.85$, $p < .001$, $\eta^2 = .10$. Whites attributed, on average 28.47% ($SE = 1.43$) of the responsibility for the disaster to the residents of New Orleans, while for Blacks this figure was significantly lower ($M = 20.68\%$; $SE = 1.45$), $F(1,483) = 12.75$, $p < .001$, $\eta^2 = .03$.

These findings support H1a and H1b—two hypotheses that are consistent with previous public opinion surveys examining the public perception of Hurricane Katrina's aftermath.

H2: Whites reading news stories that include images of Katrina victims will attribute less responsibility for the aftermath of the storm to the government than those reading stories without images.

H3: Black respondents will be less affected than Whites by the inclusion of images of victims in the news stories than White victims.

Table 2 Mean Levels of Attribution of Government Responsibility (by Experimental Condition and Respondent Race)

Condition:	White Respondents (<i>N</i> = 252)	
	Responsibility Scale (<i>SE</i>)	Responsibility Percentage (<i>SE</i>)
Black individual	3.88 (0.13)	31.89 (2.70)
Black group	4.04 (0.14)	32.45 (2.94)
White individual	4.14 (0.15)	33.82 (3.12)
White group	3.98 (0.14)	30.85 (2.87)
No images	4.58 (0.19)	40.99 (4.04)
<i>F</i> (4,244)	2.53*	1.19
Black Respondents (<i>N</i> = 252)		
Black individual	5.12 (.13)	59.14 (3.48)
Black group	5.22 (.12)	55.48 (3.06)
White individual	4.98 (.10)	49.59 (2.73)
White group	4.91 (.13)	51.89 (3.36)
No images	5.12 (.18)	55.09 (4.96)
<i>F</i> (4,244)	1.04	1.35

Note: *F*-values reported for the experimental manipulation overall.

**p* < .05. Party identification (seven-point) and education included in the models as covariates.

For White respondents (*N* = 252), a clear pattern, consistent with theoretical expectations, emerges. White respondents who were exposed to pictures of survivors held the federal government less accountable for the storm than White readers who did not see any images (Table 2). White respondents scored higher on the “government-responsibility” scale in the no-image condition (*M* = 4.58, *SE* = 0.19) than in all of the other conditions: Black-individual (*M* = 3.88, *SE* = 0.13), Black-group (*M* = 4.04, *SE* = .14), White-group (*M* = 3.98, *SE* = 0.14), and White-individual (*M* = 4.14, *SE* = 0.15). The overall effect of the experimental condition was statistically significant using an alpha level of .05 as the criterion: *F*(4, 244) = 2.53, *p* = .041, $\eta^2 = .04$. Turning to the percentage of responsibility ascribed to the federal government, Whites attributed the highest share in the no-image condition (*M* = 40.99%; *SE* = 4.04). Wherever images appeared, the mean percentage of government responsibility ranged between 30.85 and 31.89%. This measurement ($\eta^2 = .02$), however, fell short of statistical significance: *F*(4,244) = 1.189, *p* = .316.

Figure 1 illustrates the findings for planned multiple comparisons: for White respondents, the difference between the no-images condition (*M* = 4.58, *SE* = 0.19) and the Black-images condition (*M* = 3.95, *SE* = 0.09) is significant at *p* = .004; the difference between the no-images condition and the White-images condition (*M* = 4.06, *SE* = 0.10) is significant as well (*p* = .017).⁸ Similarly, on the question of percentage of ascribed responsibility, the difference between the no-images condition (*M* = 41.00, *SE* = 4.02) and the Black-images condition (*M* = 32.14, *SE* = 1.99)

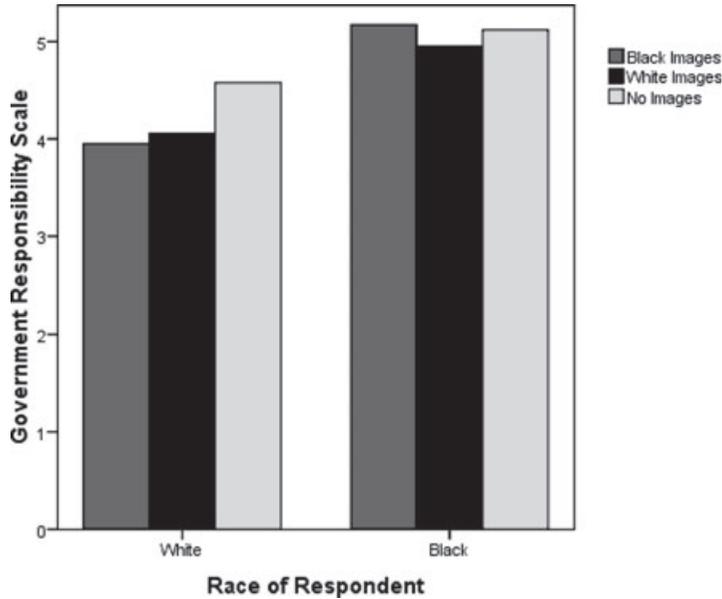


Figure 1 Planned comparisons for the effect of images on assessment of government responsibility (by race). For White respondents ($N = 252$), the difference between the no-images condition and the Black-images condition is significant at the .05 level ($p = .004$); the difference between the no-image condition and the White-images condition is significant ($p = .017$). The difference between the Black-images and White-images condition is not statistically significant ($p = .455$). Test for familywise error: $F(3,245) = 2.83$; $p = .039$. For Black respondents ($N = 252$), the difference between the no-images condition and the Black-images condition is not statistically significant ($p = .805$); the difference between the no-image condition and the White-images condition is not significant ($p = .390$). The difference between the Black-images and White-images condition is near-significant ($p = .062$). Test for familywise error: $F(3, 245) = 1.28$; $p = .283$.

is significant ($p = .05$) as is the difference between the no-images condition and the White-images condition ($M = 32.20$, $SE = 2.11$, $p = .057$). However, for the percentage parameter, the test for familywise error cannot rule out the null hypothesis: $F(3,245) = 1.45$, $p < .230$.

Regression analysis offers a clearer picture of the extent to which the presence of images in news stories affected White respondents (Table 3). Controlling for party identification, education, and gender, Whites scored, on average, .58 points lower on the government-responsibility scale when images appeared in news stories, than when pictures were absent, ($\beta = -.15$, $p = .005$). Similarly, Whites attributed 8.84% less responsibility to the federal government after reading a news story with an image than when reading the story without the image, ($\beta = -.12$, $p = .040$).

The hypothesis that images of victims will decrease the perceived government responsibility is further supported when looking at the responses to the open-ended

Table 3 Regression Analysis for the Effect of Images on Government Responsibility

Dependent variable	Sample	Party (R → D) (seven-point)	Education	Gender (F)	Images	Race (Black)	Race × Images	R ²
		β	β	β	β	β	β	
Government responsibility	White	.53***	.06	-.04	-.15**			.286
	Black	.21***	.18**	-.09	-.01			.060
	All	.43***	.10**	-.07 [^]	-.30**	.26***	.23*	.328
Percentage federal government	White	.42***	.05	-.02	-.12*			.170
	Black	.14*	-.03	-.02	-.02			.007
	All	.31***	.01	-.03	-.19	.27***	.14	.240

Note: N (White) = 252; N (Black) = 252.

*** $p < .001$, ** $p < .01$, * $p < .05$, [^] $p < .10$.

question (Figure 2). Logistic regression finds that Whites in the no-image condition were almost three times more likely to volunteer the federal government as being responsible for the disaster that followed Katrina than Whites who saw images of victims in the news story ($B = -1.07$; $SE = 0.47$; odds-ratio = .34; $p = .022$).

In sum, three separate measurements converge to provide support for H2. Images of Katrina victims appearing in news stories may have driven White respondents to hold the federal government less responsible for the aftereffects of the storm. White respondents reacted to the images in accordance with theoretical expectations for episodic framing. Once their attention was directed to individuals, they tended to find structural forces, namely the federal government, *less* responsible for Katrina's aftermath.

For Black respondents, the pattern was strikingly dissimilar. For this group, there are minimal differences between the image and no-image conditions. The Black-individual and Black-group conditions (combined: $M = 5.17$, $SE = 0.12$) actually yielded higher mean scores on the government-responsibility scale than the no-images condition ($M = 5.12$, $SE = 0.18$), although the effect was weak overall ($\eta^2 = .02$) and short of statistical significance: $F(4,244) = 1.04$; $p = .388$. Likewise, when ascribing a percentage of responsibility to the federal government, Blacks in the no-image condition were not discernable from those in the other conditions: $F(4,244) = 1.35$, $p < .25$, $\eta^2 = .02$. The regression analysis (Table 3) summarizes the nonfinding for Blacks for the effect of including images: the beta values for the inclusion of images are notably small for the responsibility scale ($\beta = -.01$) as well as for the percentage measure ($\beta = -.02$). Neither effect was significant. Analysis of the open-ended responses (Figure 3) suggests some divergence from this null result for Black respondents. Here, mentions of the federal government ($B = -1.03$;

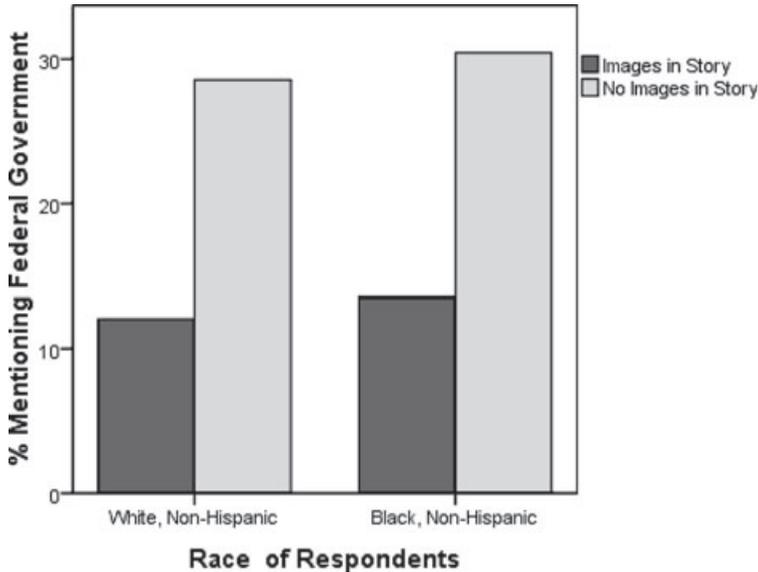


Figure 2 Percentage of respondents mentioning federal government responsibility (by race). For White respondents ($N = 252$), logit (B) = -1.07 ($SE = 0.47$) for the effect of including images on likelihood of mentioning federal government: odds-ratio = .34; $p = .022$; Black respondents ($N = 252$), logit (B) = -1.03 ($SE = .49$): odds-ratio = .36; $p = .037$; Interaction-term for race and images: logit (B) = $.04$ ($SE = .68$); odds-ratio = 1.04; $p = .957$.

$SE = 0.49$, odds-ratio = .36; $p < .037$) did appear to be affected by the presence of an image. Overall, these results largely conform to the expectation posited in H3.

H4a: News accounts including images of Black victims will lead White respondents to attribute less responsibility to the federal government for the aftermath of the storm than accounts with images of White victims.

H5a: News accounts including images of Black victims will lead Black respondents to attribute more responsibility to the federal government for the aftermath of the storm than accounts with images of White victims.

Whereas a clear pattern in attribution of government responsibility was apparent among Whites and absent among Blacks, the news image did not seem to impact assessments about the responsibility of New Orleans' residents. For Whites, the no-image condition ($M = 3.51$, $SE = 0.18$) did yield the lowest level of responsibility for the residents, however this effect was weak ($\eta^2 = .01$) and the difference fell far short of statistical significance: $F(2,244) = .82$; $p = .515$. Whites in the other conditions rated residents' responsibility at about the same score (means ranging between 3.63 and 3.81). Regression analysis finds the effect of images on Whites' attribution of responsibility to New Orleans' residents small and nonsignificant ($\beta = .04$, $p = .519$). These findings are repeated when looking at the percentage

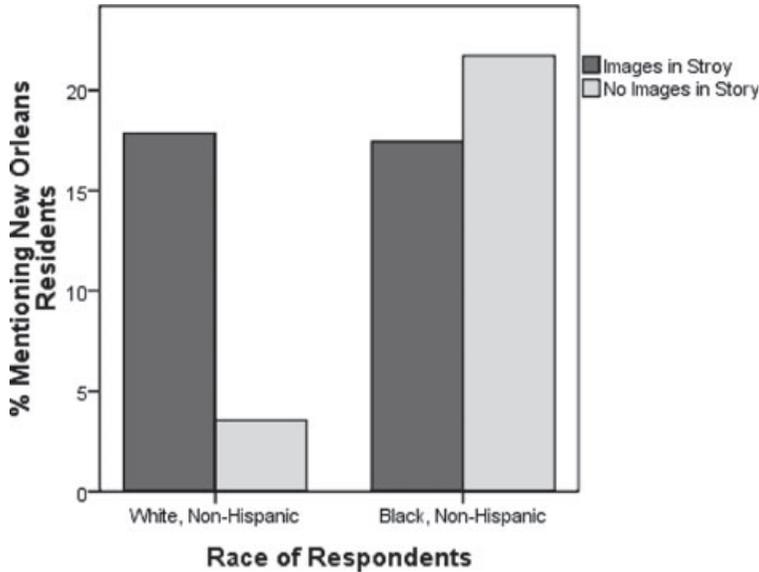


Figure 3 Percentage of respondents mentioning New Orleans residents' responsibility (by race). For White respondents ($N = 252$), $\text{logit}(B) = 1.53$ ($SE = .17$) for the effect of including images on likelihood of mentioning residents: odds-ratio = 5.88; $p = .087$; Black respondents ($N = 252$), $\text{logit}(B) = -.27$ ($SE = .54$): odds-ratio = .76; $p = .422$; Interaction-term for race and images: $\text{logit}(B) = -2.04$ ($SE = 1.17$); odds-ratio = .13; $p = .085$.

metric: the no-image condition yields the lowest percentage of responsibility that Whites ascribe to New Orleans' residents ($M = 25.19\%$, $SE = 3.87$), however the other conditions, where respondents ascribe anywhere between 29.49 and 32.40% are statistically indistinguishable: $F(4,244) = .62$, $p = .648$, $\eta^2 = .01$.

Some evidence of the anticipated effect can be found in the open-ended questions (Figure 3) where, absent the pictures, residents were hardly mentioned (in fact they were only mentioned once) by the sample of White respondents, while one sixth of those in the images condition mentioned the residents' responsibility ($B = 1.53$; $SE = 0.17$; odds-ratio = 5.88; $p = .087$). Although the odds-ratio is sizeable, the small number of overall mentions and the insufficient level of statistical significance warrant caution in attributing too much to this finding. It does add, however, to the accumulating evidence that for White respondents' images in the news stories tended to divert responsibility from the government to other possible culprits.

For Black respondents, the effect of the inclusion of images was mixed and inconclusive. On the resident responsibility scale and percentage of ascribed responsibility, the differences between the image-included condition and the no-image condition were slight and short of statistical significance. Regression analysis indicates that the inclusion of images bore essentially no effect on Black respondents' attribution of responsibility. If anything, when images were included, a smaller proportion of the Black sample (17.5%) mentioned the residents than when pictures were

absent (21.7%): $(B) = -.27 (SE = .54)$, odds-ratio = .76, $p = .422$ (see Figure 3). These results further suggest that framing effects driven by news images occurred predominantly among Whites.

For Whites, the race of the persons depicted in the news images did not affect attribution of responsibility (Figure 1). The difference between the Black-image conditions ($M = 3.95, SE = 0.09$) and the White-image conditions ($M = 4.06, SE = 0.10$) was not statistically significant ($p = .455$) for the government-responsibility scale. On the percentage of responsibility ascribed, White respondents in the Black-image conditions ($M = 32.14, SE = 1.99$) were practically indistinguishable from those in the White-images condition ($M = 32.20, SE = 2.11, p = .956$). The analysis of the open-ended responses produced similar outcomes. Altogether, these results suggest that H4a should be dismissed.

For Black respondents, however, the difference between the Black-image conditions ($M = 5.17, SE = 0.09$) and the White the image conditions ($M = 4.95, SE = 0.08$) was near-significant ($p = .062$) (see Figure 1). The test for familywise error cannot rule out that as this is a chance finding: $F(3,245) = 1.28; p = .283$. On the percentages of ascribed government responsibility, the Black-image conditions ($M = 57.07, SE = 0.09$) yielded significantly higher results than the White-images condition ($M = 50.49, SE = 2.12, p = .040$). Again, the test for familywise error cannot rule this out as a chance finding: $F(3,245) = 1.45, p = .228$.

There were significant findings in regression analysis when including no-image and White-images as dichotomous variables and Black-images as the reference category (Table 4). Blacks' attribution of responsibility to the government was lower by .24 points in the White-image conditions compared with the Black-image

Table 4 Regression Analysis for the Effect of Images in News Stories on Government Responsibility

		White	No	Race	Race ×	Race × No	R^2
Sample		Images	Images	(Black)	White	Images	
Dependent Variable		β	β	β	β	β	
Government responsibility	White	.05	.17**				.299
	Black	-.13*	-.04				.091
	All	.19 [#]	.36**	.34***	-.25 [^]	-.30*	.342
Percentage federal government	White	.00	.12*				.186
	Black	-.14*	-.03				.041
	All	.12	.23 [^]	.34***	-.22 [#]	-.21 [#]	.249

Note: $N(\text{White}) = 252; N(\text{Black}) = 252$. Reference category is Black images. The model also includes party identification (seven-point); education (six-point) and gender.

*** $p < .001$, ** $p < .01$, * $p < .05$, [^] $p < .10$, [#] $p < .15$.

conditions ($\beta = -.13, p < .043$). Similarly, Blacks attributed, on average, 6.71% less responsibility to the government ($\beta = -.14, p < .033$) in the White-image conditions than in the Black-image conditions. So, in both cases the presence of an image of White victims lead to significantly lower estimations of government responsibility by Black respondents than those exposed to other stimuli (no picture or an image with Black victims). The interaction terms in these models add explanatory power and indicate the diverging effect of images on Whites and Blacks. Blacks were less affected than Whites by the inclusion of images as opposed to images of Black victims (government responsibility scale: $\beta = -.30, p < .012$; percentage of government responsibility: $\beta = -.21, p = .110$), but, unlike Whites, they held the government more responsible in view of Black images than White ones (government responsibility scale: $\beta = .21, p = .057$; percentage of government responsibility: $\beta = .22, p = .120$). H5a, then, is partially supported by the results here.

H4b: News accounts including images of Black victims will lead White respondents to attribute more responsibility to the residents of New Orleans.

H5b: News accounts including images of Black victims will lead Black respondents to attribute less responsibility to the residents of New Orleans.

Lastly, the race of persons appearing in the image did not affect the attribution of responsibility to New Orleans residents (Table 5). This was true among both Black and White respondents and across all close- and open-ended measures. Interactions between race of respondent and race of victims tested in regression models also did not show meaningful differences. Although there were differences between racial groups

Table 5 Regression Analysis for the Effect of Images in News Stories on New Orleans Residents' Responsibility

Dependent Variable	Sample	White Images	No Images	Race (Black)	Race × White Images	Race × No Images	R ²
		β	β	β	β	β	
Residents' responsibility	White	-.04	-.05				.154
	Black	.09	-.04				.041
	All	-.15	-.06	-.37***	.19	.01	.284
Percentage residents	White	-.01	-.09				.108
	Black	.06	-.04				.01
	All	-.05	-.14	-.22***	.63	.63	.115

Note: N(White) = 252; N(Black) = 252. Reference category is Black images. The model also includes party identification (seven-point); education (six-point) and gender *** $p < .001$, ** $p < .01$, * $p < .05$, ^ $p < .10$, # $p < .15$.

in the interaction terms in the regression analyses for government responsibility (Table 3), these relationships were weak and not consistently significant.

In short, evidence for the differences between the racial groups is sparse and support for H4b and H5b is fairly weak. This does not mean that the differences do not exist. Instead, it is possible that these results reflect the subtlety of the effect and a lack of statistical power in this experiment's design rather than an absence of interracial differences in the effects of news images.

Discussion

In retrospect, Hurricane Katrina may be seen as the catalyst for a long decline in President Bush's approval ratings and perhaps even the beginning of the end of his presidency. Still, even in the face of an overwhelming belief that the government had vastly mismanaged its response to Katrina, in this experiment the mere inclusion of victims' pictures in a news story lessened the perception of governmental responsibility among white respondents. This result is remarkable given the subtlety of the manipulation and the strength of respondents' preexisting knowledge and opinions. The respondents were only asked to read the story—and the story was exactly the same in all conditions. Furthermore, the story was devoid of any reference to individual hardships, so the difference in assessing responsibility shown by respondents was due solely to the presence of an image. These findings, therefore, indicate not only the power of framing, but also the capacity of images to determine the frame through which a story is processed by news consumers. The simple presence of people as a visual enhancement of a news story changes the focal point of the reader's cognition from the generalized occurrences to the personal travails of individuals. Once the individual drives the frame of reference, the responsibility for a given set of circumstances is re-evaluated with less weight ascribed to situational factors.

The findings reported above suggest two implications of the personification of this disaster. First, as Iyengar's studies and their replications have illustrated, personal accounts can reduce the accountability attributed to contextual factors, namely the actions of the government. This also confirms Belle's (2006) expectation that coverage centering on Katrina victims could decrease the sense of government responsibility for the aftermath of Katrina. Second, this consequence is not inevitable, particularly if the force of framing is contradicted by another force—in this instance, racial affiliation. When readers of our fabricated news account were not provided with a news image of victims, they were inclined to hold the government highly responsible for what had transpired in New Orleans after the storm. This was true for Blacks and Whites. Yet the inclusion of an image and a vague caption led to a lowered sense of government culpability expressed by White respondents. This attests both to the power of news images and the strength of attitudes held by Blacks.

As evidenced by public opinion polls (e.g., Murray, 2005; Pew Research Center, 2005) and our study, Blacks overwhelmingly believed that the consequences of Katrina were a product of government incompetence or indifference in the face of the

suffering of an overwhelmingly Black population. That the inclusion of images did not lessen Blacks' perception of government responsibility speaks to the durability of these attitudes. It is also consistent with at least one previous post-Katrina study (Kaiser et al., 2008), which found Blacks' attitudes more resistant to media stimuli than those held by Whites. At the same time, this also speaks to the limitations of the effect of news images. When convictions are strong, the power of the news image may not be forceful enough to yield changes in assessments of responsibility. Future research along these lines might test another explanation, which holds that Blacks find the media less credible than Whites in its coverage of racial matters (Beaudoin & Thorson, 2005). In other words, the Black subjects in this study might have been more resistant to the experimental manipulation because they were more likely to discount the media message.

It should also be noted that the effect of images on attribution of responsibility was stronger where government culpability was concerned, but weaker when measuring attitudes toward personal accountability. This finding is not entirely surprising considering Iyengar's (1990) study of framing and unemployment, which found it to be the topic least likely to elicit the linkage between episodic framing and attribution of responsibility to dispositional Katrina's ravages, like unemployment, could not convincingly be framed as exclusively an outcome of the actions of the victims. The overall small magnitude of the effects we report should be expected since Americans were, in general, inclined to hold the government at least partially accountable for the disaster that followed Katrina (e.g., Pew, 2005; Murray, 2005). Therefore, the effects that were detected are noteworthy considering the strong set of beliefs about Katrina that many of the respondents were likely to hold prior to exposure to the experimental stimuli.

In contrast to the noted effect of images in general, the race of the person depicted in the images did not affect attribution of responsibility. One possible explanation for this nonfinding could be the atypicality of the images of white victims. Since the overwhelming majority of victims in New Orleans were Black, a fact prominently discussed in news coverage, the images of White victims could not actually affect the readers' conception of Katrina victims' race. This is consistent with existing literature on the ineffectiveness of atypical exemplars in attitude formation (e.g., Zillmann & Brosius, 2000; Strange & Leung, 1999).

Limitations

Several limitations should be taken into account when assessing this study. First, the anticipated difference in reaction to pictures of individual victims as opposed to wider shots including more victims was not found. This may have been due to insufficient differentiation among the stimuli that were meant to distinguish between these conditions. Secondly, analysis of the no-image condition was complicated by this group's smaller *N*. This flaw in the design meant that the mean values of the no-image condition were accompanied by larger standard deviations. We account

for this shortcoming by employing three separate tests to measure our key dependent variable and including the regression and logistic regression models that are not as sensitive to group size.

We should also consider the possibility that the effects were weaker than expected due to the time that elapsed between the storm, and its actual coverage, to the fielding of the experiment. People's opinions may have been firmly established long before the exposure to our stimuli and therefore they were less likely to be affected.

Lastly, our choice of images might not be indicative of the population of images as a whole. We produced these four images with the intent of making them comparable and rendering victim race and type of shot (none, group, individual) the central source of variance between the conditions. We cannot rule out the possibility that a different choice of pictures could yield different outcomes.

Conclusion

This study explores the relationship between race, attribution of responsibility, and the construction of news stories. The confirmation of several of our hypotheses indicates that differences in attribution of responsibility are clearly affected by what may be seen as slight, or even arbitrary, differences in the presentation of a news story. Most notably, the mere inclusion of images of Katrina's victims, tended to reduce White readers' sense of government responsibility for the humanitarian crisis. For Black readers, this effect did not materialize. From a broader perspective, the findings in this study are important for understanding how news coverage can impact society's expectations from its government. Although there was evident disappointment in the government as the disaster was unfolding, our study was in the field 11 months after Katrina struck the U.S. Gulf coast. As the facts became less memorable, we had an opportunity to measure how variations in the attributes of a news story could yield different outcomes in public opinion. In an era of hyper-managed political media, the findings of this study provide yet more evidence of how powerful and persuasive even minor manipulations in the presentation of news can be and how race remains a meaningful element in rendering social judgment.

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Notes

- 1 Mendelson's study ultimately finds minor effects for news images, but our current study employs a different operationalization by using a no-images condition that could provide a stronger contrast to the images of victims.

- 2 The data were collected between August 3 and August 9, 2006. Of the 704 TESS panel members contacted, 504 completed the survey.
- 3 The news story was, in fact, the Wikipedia entry for Hurricane Katrina, which did not include any evaluative statements as to the causes for the ensuing humanitarian disaster or any statements ascribing blame. See Appendix A for the text of the story.
- 4 The images of victims were superimposed on the same location using Adobe Photoshop. Photos were taken from actual images of Katrina survivors.
- 5 McDonald's items are based on the Florida Annual Policy Survey (FAPS, 2000).
- 6 The government-responsibility scale was correlated with the percent of responsibility subjects attributed to the federal government ($r = .70; p < .001$) and the resident-responsibility scale was similarly correlated with the percentage of responsibility attributed to the residents of New Orleans ($r = .52; p < .001$).
- 7 The open-ended questions were coded separately by the authors. The subjects' responses appeared on a spreadsheet in which no information about the experimental conditions was available. In this way, the coders could not be biased in their assessments by the hypotheses. Responses were coded for the mention of the federal government, New Orleans residents, local authorities or the forces of nature (the latter two falls outside the scope of this paper). On mentions of the federal government, the coders agreed in 94.8% of the 504 instances (Scott's $\pi = .75; p < .001$). On mentions of resident responsibility the coders agreed in 95.2% of the instances (Scott's $\pi = .81; p < .001$). In sum, 76 mentions of federal government responsibility were coded along with 81 mentions of resident's responsibility.
- 8 Test for familywise error: $F(3,245) = 2.83, p = .039$.

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Appendix A

(Text of the story used in all conditions)

Hurricane Katrina: one of the worst disasters in recent American history (Associated Press)

Hurricane Katrina was the costliest and one of the deadliest hurricanes in the history of the United States. It was the sixth strongest Atlantic hurricane ever recorded and the third strongest landfalling U.S. hurricane ever recorded. Katrina occurred late in August during the 2005 Atlantic hurricane season, and had catastrophic effects on the city of New Orleans, Louisiana. Its sheer size devastated the Gulf Coast over 100 miles (160 km) away from its center.

Katrina was the 11th named storm, 5th hurricane, 3rd major hurricane, and second Category 5 hurricane of the 2005 Atlantic season. The storm surge caused major or catastrophic damage along the coastlines of Louisiana, Mississippi, and

Alabama, including the cities of Mobile, Alabama, Biloxi and Gulfport, Mississippi, and Slidell, Louisiana.

Levees separating Lake Pontchartrain from New Orleans were breached by the surge, ultimately flooding roughly 80% of the city and many areas of neighboring parishes. Severe wind damage was reported well inland.

Katrina is estimated to be responsible for \$75 billion (2005 US dollars) in damages, making it the costliest hurricane in U.S. history. The storm killed at least 1,836 people, making it the deadliest U.S. hurricane since the 1928 Okeechobee Hurricane.

Appendix B

Government-responsibility scale ($\alpha = .89$)

(6-Point scale, from *strongly disagree* to *strongly agree*).

1. The federal government did as good a job as it could in responding to Hurricane Katrina. (R)
2. The government should have done more in order to help evacuate the people who wanted out of New Orleans following Hurricane Katrina.
3. The government should not be held accountable for what happened to the people in New Orleans. (R)
4. The government did all it could to aid the relief efforts in New Orleans. (R)
5. The government failed the people of New Orleans.
6. The government did not try hard enough to help the people who went to the Superdome and Convention Center.

Resident-responsibility scale ($\alpha = .87$)

7. People who stayed in New Orleans after the evacuation order are responsible for what happened to them.
8. Most people who stayed in New Orleans after the evacuation order did so because they could not leave on their own. (R)
9. The people who remained in New Orleans after the evacuation order acted irresponsibly.
10. The people who remained in New Orleans after the evacuation order could have left the city if they tried hard enough.
11. The people who went to the Superdome and Convention Center did so because they had no way of leaving New Orleans. (R)
12. Most people who stayed in New Orleans through Hurricane Katrina chose to do so.

(R) = Questions that were reverse-coded for the analyses.

Appendix C. Factor Analysis for Responsibility Scales

Question	Factor 1	Factor 2
1	.759	.203
2	.742	.168
3	.652	.354
4	.758	.346
5	.781	.379
6	.743	.353
7	.237	.808
8	.449	.582
9	.221	.820
10	.362	.793
11	.611	.380
12	.342	.667
Eigen value	6.577	1.104

Note: $N = 504$. Question number refers to Appendix B.

卡特里娜飓风之后的新闻图片、种族和责任归属

Eran N. Ben-Porath

SSRS/Social Science Research Solutions

Lee K. Shaker

普林斯顿大学

【摘要：】

本文研究了新闻图片和种族对卡特里娜飓风后果的责任归属的影响。黑人和白人参与者阅读了同样的关于飓风及其后果的新闻，实验控制了包括白人受害者，黑人受害者，或者没有受害者的形象。参与者被问到谁应对飓风后的人道主义灾难负责。如果新闻出现了受害者的形象，白人参与者较少地认为政府应当负责。然而该效应并未在黑人参与者中出现。新闻图片并未影响新奥尔良居民责任的归属问题。这些发现支持了对图像作为情节框架机制的理论解释。

Les images médiatiques, la race et l'attribution à la suite de l'ouragan Katrina

Eran N. Ben-Porath & Lee K. Shaker

Cette étude explore l'effet des images médiatiques et de la race sur l'attribution d'une responsabilité quant aux conséquences de l'ouragan Katrina. Les participants, Noirs et Blancs, ont lu la même nouvelle concernant l'ouragan et ses suites, l'histoire ayant été manipulée pour inclure des images de victimes blanches, des images de victimes noires ou aucune image du tout. On a ensuite demandé aux participants de dire qui était selon eux responsable du désastre humanitaire ayant suivi la tempête. Les répondants blancs ont exprimé moins d'impressions de responsabilité gouvernementale lorsque l'histoire incluait des photos de victimes. Cet effet n'est pas apparu chez les participants noirs. Les images n'ont pas eu d'effets sur l'attribution de responsabilité aux résidents de la Nouvelle-Orléans. Ces résultats sont interprétés de manière à appuyer les attentes de la théorie du cadrage, les images servant de mécanismes de cadrage épisodique.

Mots clés : attribution, race, cadrage de responsabilité, ouragan Katrina

Nachrichtenbilder, Rasse und Zuschreibung im Fall Hurrikan Katrina

Eran N. Ben-Porath & Lee K. Shaker

Diese Studie betrachtet die Wirkung von Nachrichtenbildern und Rasse auf die Zuschreibung von Verantwortlichkeit für die Konsequenzen von Hurrikan Katrina. Die Teilnehmer schwarzer und weißer Hautfarbe lasen die gleichen Nachrichten über den Hurrikan und dessen Folgen. Die Bilder zeigten entweder weiße Opfer, schwarze Opfer oder es wurde auf eine Bebilderung verzichtet. Die Teilnehmer wurden dann gefragt, wen sie für die humanitäre Katastrophe nach dem Sturm verantwortlich machten. Weiße Teilnehmer zogen die Regierung weniger in die Verantwortung, wenn Bilder von Opfern gezeigt wurden. Für schwarze Teilnehmer zeigte sich dieser Effekt nicht. Die Bilder beeinflussten nicht die Zuschreibung von Verantwortlichkeit auf die Einwohner von New Orleans selbst. Diese Ergebnisse werden im Sinne der Annahmen der Framing-Theorie interpretiert, bei denen Bilder als episodische Framing-Mechanismen dienen.

허리케인 카트리나발생에서의 새로운 이미지들, 인종, 그리고 특성

Eran N. Ben-Porath

Lee K. Shaker

요약

본 연구는 허리케인 카트리나의 결과에 대한 책임의 속성에 대한 새로운 이미지와 인종의 효과를 연구한 것이다. 참여자들은 흑인과 백인들로 허리케인과 이의 여파에 대한 같은 뉴스를 읽었는데, 백인피해자들의 이미지, 흑인피해자들의 이미지, 그리고 이미지가 전혀없는 상황을 만든 상태에서 연구가 실시되었다. 참여자들은 이후 태풍이후 인간재해에 대하여 누가 책임이 있다고 느끼는가에 대하여 질문에 답하게 하였다. 백인 응답자들은 피해자들의 이미지들이 포함된 상태에서 정부의 책임이 그리 크다고 느끼지 않았다. 흑인 응답자들에게는 이러한 효과가 일어나지 않았다. 이미지들은 뉴 올리언즈 주민들에 대한 책임의 속성에 영향을 미치지 않았다. 이러한 발견들은 일시적인 프레이밍 구조들로서 역할하는 이미지들을 지닌 프레이밍 이론의 기대들을 지지하는 것으로 해석되어질 수 있다.