

ORIGINAL ARTICLE

Moderating Effect of Group Cue While Processing News on Immigration: Is the Framing Effect a Heuristic Process?

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This paper presents a study on the sociocognitive effects of news frames on immigration. One hundred and eighty-six individuals were exposed to a newspaper story on increased immigration to Spain. The newspaper highlighted (a) the positive (economic contribution frame) versus negative (crime growth frame) consequences and (b) the group cue—Latinos versus Moroccans. In contrast with economic contribution frame, crime growth frame stimulated more negative cognitive responses toward immigration, increased the salience of immigration as a problem, generated a negative attitude toward immigration, and induced greater disagreement with positive beliefs about the consequences of immigration for the country. We conceptualized the framing effect as a heuristic process in which peripheral cues in the news story guided information processing.

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Bryant and Miron (2004) clearly demonstrated the popularity of framing theory, which has emerged as one of the most developed and frequently cited perspectives in recent times. Research in this field seems to be in agreement that the way a social issue is approached in the news influences how that news is interpreted and shapes the attitudes of viewers (Reese, Gandy, & Grant, 2001). However, one of the controversial aspects of framing is related to identifying the underlying mechanisms that explain how framing works. This work attempts to contribute to our knowledge of the explanatory mechanisms of framing by focusing on how individuals use heuristic principles and the role played by peripheral processing.

Context: Immigration in Spain

Before reviewing the state of research on framing and its explanatory mechanisms, it will be useful to provide background information on immigration in Spain within

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the European context. In the first place, immigration is not a recent phenomenon in Europe, since it was stimulated at the end of World War II to reactivate the economy, which needed a large work force. In this context, for decades Spain sent emigrants to the countries of northern Europe (such as Germany) and Latin America, in part because of the specific political conditions existing under the Franco dictatorship. However, since the mid-1990s, Spain has turned into a receiving country (Igartua, Cheng, & Muñiz, 2005; Solé, Parella, Alarcón, Bergalli, & Gilbert, 2000). The rise in immigration to Spain has taken place in a very short period of time, increasing from 1.3% of the population in 1995 to 8.7% in 2006 (INE, 2006). Furthermore, this rise in foreign population has been accompanied by an increase in the perception of immigration as a problem and by attitudes of rejection (Cea D'Ancona, 2004). In 1995, 51% of Spaniards said they were *tolerant* of immigration, by 2004 this percentage had fallen to 29% (Cea D'Ancona, 2007).

The factors explaining attitudes of rejection toward immigrants are diverse: There are sociodemographic factors, political ideology, the perception of a social or cultural threat, and the level of contact one has with immigrants (Cea D'Ancona, 2004; Pettigrew & Meertens, 1995; Ramos, Techio, Páez, & Herranz, 2005). However, one situational factor that contributes to generating stereotypical images of immigration is the way in which the media inform about it (van Dijk, 1996). Moreover, according to Hallin and Mancini (2004), in Spain the media are still exploited to a certain extent by political elites. That is why when Spanish media presents information on immigration it must also analyze or describe how the political elite view the issue. The positions of the two major parties in Spain (the Popular Party on the right and the Socialist Party on the left) have been quite different with respect to immigration. The right has tried to link immigration to the increase in crime in Spain, promoting an image of immigrants as delinquents and fostering the perception of threat. However, the left has associated immigration with economic progress and the economic contribution of immigrants, and in general has more open and positive attitudes toward immigration (Cea D'Ancona, 2004). Two discourses are thus superimposed, that of threat and that of economic contribution, although the former stands out more in the Spanish media (e.g., Igartua, Muñiz, & Cheng, 2005). In this context, it has been argued that the media, by systematically linking immigration to crime and to all kinds of social conflict, are fostering or *activating* xenophobia in public opinion (Cea D'Ancona, 2004, 2007). For this reason, the research presented here is an attempt to contribute to the study of framing effects, because it can be assumed that attitudes toward immigration may be influenced by the information given in the media and by the way it is framed.

Sociocognitive effects of news frames

Recent developments in research on the sociocognitive effects of the news posit that information presented by the media not only *set* the public agenda (salience or the perceived importance of social affairs), but also *dictate* to the public how to think

about certain matters (McCombs & Ghanem, 2001; Reese et al., 2001; Scheufele & Tewksbury, 2007; Weaver, 2007). In this context, the concept of the news frame is particularly relevant. This refers to a process involving two operations: selecting and emphasizing words, expressions and images, to lend a point of view, focus or angle to a piece of information (Entman, 1993; Scheufele, 1999, 2000; Tankard, 2001). News frames can play different roles, acting as dependent or independent variables (Scheufele, 1999).

When understood as dependent variables, frames are contained within the news and are the result of production processes in the communication media. Research into news frames has been developed from different perspectives, one of the most fertile being the analysis of the informational treatment of different social topics and objects (e.g., Cappella & Jamieson, 1997; Igartua, Cheng, & Muñiz, 2005; Iyengar, 1991; Miller, Andsager, & Reichert, 1998; Semetko & Valkenburg, 2000). Studies on the treatment of immigration in the press and on television have shown that there is a tendency to link immigration with delinquency, crime, and other social problems, whereas information on the positive contributions of immigration to the receiving country is given to a much lesser degree (Coole, 2002; d'Haenens & de Lange, 2001; Gardikiotis, 2003; Igartua, Muñiz & Cheng, 2005; ter Wal, d'Haenens, & Koeman, 2005; van Dijk, 1989; Van Gorp, 2005; Vliegthart & Roggeband, 2007). In this sense, one of the main problems associated with ethnic minorities and immigrants is the increase in delinquency and crime (Dixon & Linz, 2000; Entman, 1992, 1994; Romer, Jamieson, & de Coteau, 1998).

News frames can also be conceived as independent variables, that is, as properties of informational texts that condition the processes of news reception and impact. This line of research is linked to analysis of the so-called framing effect, which refers to two differentiated processes (Scheufele, 1999, 2000). The first of these (frame-setting) refers to the fact that news frames induce cognitive channeling effects. Abundant empirical evidence shows that the type of frame used to put together a news piece has a significant impact on the cognitive responses of subjects (e.g., de Vreese, 2004; Price, Tewksbury, & Powers, 1997; Shen, 2004a; Valkenburg, Semetko, & de Vreese, 1999). Second, it has been verified that news frames affect attitudes, beliefs, and the level of cognitive complexity with which people think about social topics (e.g., Boyle et al., 2006; Iyengar, 1991; Keum et al., 2005; McLeod & Detenber, 1999; Nelson, Clawson, & Oxley, 1997; Nelson & Oxley, 1999; Shah, Kwak, Schmierbach, & Zubric, 2004). Recently, Aday (2006) has established that news frames can influence our perception of the importance of social issues and not just their definition.

In spite of the growing number of experimental research studies on the framing effect, there is scant empirical evidence regarding the impact of news frames about immigration (Brader, Valentino, & Suhay, 2004; Cho, Gil de Zuniga, Shah, & McLeod, 2006; Domke, McCoy, & Torres, 1999). Domke et al. manipulated a newspaper article in which three political candidates expounded their points of view on immigration, creating two versions according to the type of dominant frame (economic consequences *vs* a moral approach). It was observed that the news frames

about immigration not only channeled cognitive response (frame-setting) but they also contributed indirectly to the forming of judgments on this topic. Similarly, Cho et al. observed that reading a news story in which Arab citizens were described as *immigrants* and *extremists* reinforced the association between a negative view of Arabs and rejection of immigration. Brader et al. observed that a news story focusing on the negative consequences of immigration, as opposed to a news story pointing out its positive aspects, stimulated more negative attitudes toward immigrants, greater reactions of anxiety over the increase in immigration and a greater perception of threat. The results of these studies seem to conclude that the way information on immigration is focused directly and indirectly influences attitudes toward immigrants.

Is the framing effect a heuristic process?

The current debate focuses on analyzing the explanatory mechanisms of the framing effect (Nelson, Oxley, & Clawson, 1997; Price & Tewksbury, 1997; Scheufele, 2000). Matthes (2007) points out that most of the theorizing on framing has developed from the concept of accessibility (memory-based model). However, the framing effect has also been linked to the applicability of the knowledge activated upon receiving the news, that is, with the activation of trains of thought that spontaneously influence the forming of attitudes and beliefs (on-line model), thanks to the emphasis on certain attributes in the news story (Price & Tewksbury, 1997; Price et al., 1997). Despite this, the debate regarding the explanatory processes of the framing effect is still open, and it is thus too early to determine whether it should be conceived as an effect depending on the “accessibility” or the “applicability” of the knowledge activated during reception of the news (McCombs, 2006).

The thesis maintained in this work is that the framing effect may be governed by heuristic processing. This idea is based on Perse's (2001) reflection regarding framing, and converges with Shrum's (2004) heuristic processing model of television messages to explain the cultivation effect. Matthes (2007) has pointed out that the framing effect can occur through six different routes, one of them being persuasion. Thus, it is hypothesized that when media consumers are not particularly motivated to process information (which could be the default position, given the low indices of information retention; Machill, Köhler, & Waldhauser, 2007), the presence of peripheral cues in a news message can condition cognitive channeling and the attitudinal impact associated with the impact of news frames.

Perse (2001) also argues that the Elaboration Likelihood Model (ELM) could be conceived as a general model for understanding the impact of media messages. Thus, the effects of framing could be explained as the result of peripheral route processing (Petty & Cacioppo, 1986). ELM posits two different routes responsible for the change in attitudes: central route processing and peripheral route processing. On one hand, central route processing means that the receiver of the message tries to make a critical and exhaustive evaluation of it, establishing a relatively rational process that is controlled, conscious, and focused on the adaptation of its arguments.

Peripheral route processing, on the other hand, is superficial and automatic and based on peripheral cues (who says what, how it is said, etc.). In this context, heuristic processing (which operates through the peripheral route) refers to the application of simple rules for deciding about aspects that are not central to the message (e.g., “if the news story appears in a prestigious newspaper as opposed to the sensationalist press, the information is more likely to be true and to have been verified”).

Druckman (2001) has empirically observed that source credibility can increase or limit the framing effect. He empirically verified that a frame sponsored by an unreliable source (*National Enquirer*) was less convincing and influential than the same frame attributed to a highly credible source (*New York Times*). There is also empirical evidence indicating that the framing effect occurs more easily among individuals with low political involvement and also that people showing a strong adherence to a specific political party are less affected by framing (Iyengar, 1991; Kinder & Sanders, 1990). Furthermore, it has been observed that the framing effect is moderated by individuals' previous level of knowledge (Shen, 2004a) and political predisposition toward the issue in question (Keum et al., 2005). These results are convergent with the ELM model of Petty and Cacioppo (1986), because it is thought to be more difficult to persuade a person who is motivated or has the ability to process messages. Nonetheless, the usual context of news reception is more often than not presided by a low level of capability and/or motivation, so peripheral route processing is what usually occurs, and that rests on the application of heuristics (Shen, 2004b).

Cho et al. (2006) have used the “news cue” concept to refer to “the labels used to identify policy issues, characterize social groups, and define public figures in the news” (p. 136). Cho et al. manipulated the cues characterizing the Arab protagonists of a news story about the restriction of civil liberties in the context of the war on terrorism as a consequence of the 9/11 attacks. Two groups of news cues were used simultaneously to represent the Arabs as a more or less threatening group, by emphasizing their categorization as an exogroup (immigrants) or as an endogroup (citizens), and as extremists or moderates. The results show the strong impact of the cues used to characterize the Arabs: The combination of the label “immigrant” and “extremist,” which activated the stereotype of Arabs as a threatening group, reinforced the association between a negative assessment of Arabs and rejection of immigration.

The results of Cho et al. (2006) converge with those obtained in research on cues (textual or visual) about the racial or group origin of news protagonists in the activation of stereotypes (e.g., Brader et al., 2004; Domke, 2001; Gilliam, Iyengar, Simon & Wright, 1996; Gorham, 2006; Peffley, Shields, & Williams, 2001). It was observed that manipulating the race of a suspect (African American vs. White) in the context of a news story on crime influences individuals' concern about crime and attributions about causality (Gilliam et al., 1996), biases the assessment made of the suspect (Peffley et al., 2001) and influences the type of language used to describe the criminal (Gorham, 2006). Domke (2001) verified that the presence of racial cues using stereotypical written expressions associated with African Americans

(e.g., inner-city, gangs, disadvantaged teenagers, crack cocaine, etc.), influenced the cognitive responses written by the subjects after reading a news story on crime and reinforced the association between a conservative political ideology and greater support for punitive measures to fight crime. Finally, Brader et al. observed that a news story about the increase in immigration to the United States emphasizing the negative consequences (as opposed to the positive ones) stimulated more negative attitudes toward immigrants and greater anxiety if the origin of the immigrants was said to be Mexican rather than European.

One peripheral cue in the context of news on immigration is the reference to the national or geographic origin of the immigrants (group cue) (Brader et al., 2004). In fact, it has been shown that in writing news about immigration, reference to the origin of the protagonists is quite common (Coole, 2002; Gardikiotis, 2003; Igartua, Muñiz, & Cheng, 2005; ter Wal et al., 2005; van Dijk, 1989; Van Gorp, 2005). Moreover, in the Spanish context, the existence of greater prejudice toward immigrants from Morocco and greater acceptance of Latin Americans has been observed (Cea D'Ancona, 2004; Ramos et al., 2005). In light of all this, taking as a reference the research on the framing effect and the impact of peripheral cues in the news, an experiment was carried out that is presented here. The participants in the experiment were exposed to a news story providing information on the increase in immigration to Spain, with manipulation of the type of consequences emphasized (increase in crime *vs* economic contribution) and the origin of the immigrants in question (Moroccan *vs* Latin American). If the framing effect can be explained by the activation of heuristic processing, the presence of peripheral elements in a news story on immigration (reference to the origin of the immigrants) should modify the impact of the news frames. Moreover, Richardson (2005) has observed that news frames can be effective for activating different social identities and this explains their impact. Thus, a reference in the news story to Moroccan immigrants can activate the polarization between “them” (disparaged exogroup) and “us” (the endogroup, a country that is progressing economically and takes in immigrants), leading to a decrease in the positive impact of the frame of economic consequences. In this context, the following hypotheses were posed:

H1: Subjects exposed to the news frame of economic contribution will generate more positive cognitive responses toward immigration, more cognitive responses focused on the frame of economic consequences and less focused on the frame of conflict than subjects exposed to the news frame that associates immigration with crime. This result will be less pronounced when the immigrants in the news story are of Moroccan origin.

H2: The frame that refers to the economic contribution of immigrants, as opposed to the frame linking immigration to crime, will induce a lower perception of immigration as a problem, a more favorable opinion of immigration and a higher degree of agreement with beliefs that relate immigration to the economic progress of the country. This outcome will be less pronounced when the immigrants in the news story are of Moroccan origin.

Method

Participants

Participating in the study were 186 students of Spanish nationality from the University of Salamanca¹ with a mean age of 20.95 (range: 18–38); 75.8% were women.

Design and procedure

A 2×2 between-subjects factorial design was used, the independent variables being the type of frame and the type of immigrant group referred to incidentally. Two types of news frame were used: (a) immigrants as delinquents; and, (b) immigrants' economic contribution. Half of the news stories referred to Moroccan immigrants and the other half to Latin American immigrants.

The split-ballot questionnaire was administered in several classrooms at the University of Salamanca. In each classroom, the subjects were randomized into the four experimental conditions. Information on the objectives of the study was given on the title page of the questionnaire. The experimental news story was located on the second page. It had the same headline in all four conditions: *Spain's Immigrant Population Reaches 4 million—9% of the Population*. On the following pages were the dependent variables, manipulation check variables, and control variables.

The news stories used in the experimental study were constructed by taking as a reference previous research of content analysis. The four experimental news stories used (containing between 592 and 620 words) had a common core section presented as the main topic. Thus, the headline, lead, and conclusion of all four experimental news stories were the same. They referred to the increase in immigration to Spain and its consequences, supported by facts. The news stories contained testimonies and direct quotes from experts and citizens who gave their personal opinion on the news topic.

The general text of the experimental news story used was focused on the latest data from the Spanish National Institute of Statistics (INE) regarding the increase in the immigrant population in Spain and future trends. Within this context, the development of the news story (composed of three paragraphs) refers to the consequences of immigration in Spain. Two versions of the news story were created according to the salient frame used. One of them (conflict frame) referred to the negative consequences of immigration for the country, linking the text to different pieces of information, contributed by a supposed expert, about the increase in crime attributable to immigration. A recent incident of a crime committed by an immigrant resulting in the death of a native citizen was also reported:

Although the consequences of the increase in immigration can be seen at different levels, one of the most debated issues in recent years has been the link between immigration and crime. According to the recent study entitled "Immigration and Crime," directed by Professor Andrés Avilés of the University Institute for Research on Homeland Security, there has been a notable increase in crimes committed by foreigners. Professor Avilés concluded his study affirming that 'the relationship between immigration and crime in Spain is no

myth; it is a fact that arrest rates are higher among immigrants than among the native population, and the same could be said of imprisonment rates' (. . .).

In another version (economic consequences frame), after the general information on the increase of immigration to Spain, the positive economic consequences of immigration for the country were highlighted, with data contributed by a supposed expert. The revitalization of small businesses in areas where immigrants reside and the jobs taken on by immigrants that had been rejected by autochthonous citizens were reported:

Although the consequences of the increase in immigration can be seen at different levels, one of the most debated issues in recent years has focused on determining the economic consequences of immigration. Andrés Avilés, Professor of the Study Institute on Migrations of the Catholic University of Comillas, warns that "knowing what is happening with our immigration, in particular its impact on our future, is a pressing need." It must be noted that the process of immigrant regularization, which was open from February 7th to May 7th, will have the direct consequence of contributing between 1,000 and 1,500 million euros to Social Security, thus providing a greater guarantee for Social Security benefits (. . .).

The second manipulation of the news story was related to the incidental presentation of information on the geographical or national origin of the immigrants mentioned (group cue). First, in one of the versions it was affirmed that the most important group of immigrants to settle in Spain was the Moroccans, whereas in the other version it said this group was composed of Latin Americans: "(. . .) The Statistics Office does not yet have information on the nationality of the new immigrants and their geographical distribution. However, at the beginning of 2005 the [Moroccan community was the most numerous (505,373 persons)]/[Latin American community was the most numerous, most of them Ecuadorian (491,797), Colombian (268,931), Argentinean (151,878) and Bolivian (96,844)]." Likewise, throughout the news story, and depending on the type of frame emphasized, two more references were made to either Moroccan or Latin American immigrants when narrating different facts. For example, in the version with the conflict frame the same criminal act was described but attributed in one case to Moroccans and in the other case to Latin Americans:

One of the latest crimes committed by immigrants occurred in May in the Villaverde district of Madrid. A 17-year-old Spanish youth was stabbed to death. The accused is a young man of [Moroccan/Latin American] origin who admitted to the deed at the police station shortly after being arrested (. . .).

Variables and instruments

Cognitive responses

These were evaluated by means of the thought-listing technique (Valkenburg et al., 1999). The subjects were asked to "write down all the thoughts, ideas, or reflections

induced by reading the news story, that is, those impressions that came to mind while reading it.” Taking each of the written ideas as a unit of analysis, two analysts evaluated the criteria: (a) presence of the *conflict frame*, by means of comments on the relation between immigration and criminality, decline in law and order, references to crimes committed by immigrants or the increase in foreign prisoners in Spanish jails (1 = *yes*, 0 = *no*); (b) presence of the *economic consequences frame*, by means of comments on the improvement of the economy, immigrants’ having jobs that nobody else wants, reinforcement of the working population or the increase in business activity (1 = *yes*, 0 = *no*); (c) *polarity of the cognitive response*: critical, negative, or unfavorable comment (value -1), ambivalent, nonevaluative, or descriptive comment (value 0), or a positive or favorable comment (value 1), in relation to immigration. To evaluate the reliability of the coding process, 28 questionnaires were chosen randomly (11% of the sample, for a total of 101 cognitive responses) and two independent analysts coded the criteria in question. The reliability of the coding of the cognitive responses was calculated using Scott’s pi coefficient, which gave the following values: reference to the conflict frame (0.88), reference to the economic consequences frame (0.79) and polarity (0.68).

Evaluation of the news story

A semantic differential composed of 11 bipolar (7-point) scales was used, at either end of which were the antonymic adjectives “attractive–repulsive,” “understandable–incomprehensible,” “clear–confusing,” “deep–superficial,” “objective–biased,” “complex–simple,” “contextualized–decontextualized,” “imprecise–rigorous,” “easy to read–difficult to read,” “pleasant–unpleasant,” and “entertaining–boring.”

Information recall

By means of three open questions, the subjects were asked about: the main theme of the news story (the link between immigration and crime *vs* the positive economic consequences of immigration), the percentage of immigrants in Spain according to the news story (9%), and the origin of the immigrants involved in the news story (Latin Americans *vs* Moroccans). These questions were coded by two different individuals, who had to judge whether the subject mentioned the information (1) or not (0) in each case.

Importance of immigration as a problem

The text of the question was the following: “Please indicate to what extent, in your opinion, the following matters are important problems for the country” (*immigration* was one of 13 matters presented). Subjects had to choose a level of importance between (0 = *not at all important*) and (10 = *very important*).

Attitude toward immigration

Subjects were asked the following: “As you know, all developed countries receive immigrants. Do you think that, in general, immigration is more positive or more

negative for Spain?" (Cea D'Ancona, 2004). Subjects indicated their opinion on a 11-point scale (0 = *very negative*, 10 = *very positive*).

Beliefs about the consequences of immigration

A scale was built with eight affirmations about the consequences of immigration in Spain (Cea D'Ancona, 2004; Domke et al., 1999). Subjects had to indicate to what degree they agreed with the following statements (1 = *totally disagree*, 5 = *totally agree*): 1) "Immigrants take on jobs that native Spaniards don't want," 2) "In Spain today we still need immigrant workers," 3) "The increase in immigration favors an increase in crime," 4) "By accepting lower salaries, foreign workers lower the salaries of Spanish workers," 5) "There is a close relationship between immigration and a decline in law and order," 6) "Immigrants take jobs away from Spanish workers," 7) "The increase in immigrants favors the economy of the country," and 8) "In general, immigrants are contributing to Spain's development." Principal components analysis with varimax rotation extracted two factors (58.88% of the variance). The first factor (items 3–6) refers to the belief that "immigration favors an increase in crime and unfair competition for Spanish workers" ($\alpha = .77$); the second factor (items 1, 2, 7, and 8) refers to the belief that "immigration contributes economically to the country" ($\alpha = .68$).

Political self-positioning

The participants were asked the following question: "When we talk about politics, the expressions 'left' and 'right' are normally used. Taking into account the following scale, which number best represents your political position?" A 10-point scale was used, in which 1 = *left* and 10 = *right*.

Media consumption

The following questions were put to the subjects: "In general, how many hours of television do you watch in a typical day? Do you listen to the radio? Do you read the general-interest press? Do you surf the Internet?"

Level of contact with immigrants

Subjects were asked whether they had any kind of relationship with immigrants, at that time or in the past (1 = *yes*, 0 = *no*), as family, friends, colleagues, classmates, or neighbors (Cea D'Ancona, 2004). An index of personal contact with immigrants was created from the simple sum of the five dichotomic variables considered (theoretical range of scores from 0 to 5).

Results

Preliminary analyses

No statistically significant differences were observed among the four experimental conditions in the variables sex ($\chi^2(3) = 0.56, p = .905$), age ($F(3,178) = 0.08, p = .971$), political self-positioning ($F(3,173) = 1.49, p = .218$) or level of contact with immigrants² ($F(3,174) = 0.65, p = .581$). Neither were there significant differences in

the consumption of television ($F(3,176) = 0.11, p = .952$), radio ($F(3,73) = 0.70, p = .550$), press ($F(3,157) = 0.28, p = .837$), and the Internet ($F(3,154) = 0.37, p = .774$).

In order to verify the effectiveness of the experimental manipulation, we analyzed to what degree the subjects recalled the most significant details of the news story: Its theme, the origin of the immigrants, and the percentage of immigrants in Spain's population. No significant differences were observed in the recall of the main theme ($\chi^2(3) = 5.97, p = .113$). Correct recall of the theme according to experimental condition ranged between 95.7 and 100%. Neither were significant differences observed in the recall of the immigrants' origin ($\chi^2(3) = 5.94, p = .114$). Correct recall of the immigrants' origin ranged from 87.2 to 100%. Finally, there were no significant differences in the recall of the percentage of immigrants in Spain ($\chi^2(3) = 5.72, p = .124$). Recall ranged between 70.2 and 87.5%.

A second procedure to verify experimental manipulation consisted of analyzing the evaluation of the news story in the different conditions. No statistically significant differences were observed in 8 of the 10 evaluative attributes considered ($p > .150$). The only two differences observed referred to the criteria "understandable–incomprehensible" ($F(3,155) = 4.90, p < .003$) and "pleasant–unpleasant" ($F(3,154) = 17.51, p < .001$). As would be expected, the news story that highlighted the link between immigration and crime (which described a violent death) was assessed as more unpleasant and incomprehensible than the news story that underlined immigrants' economic contribution to the country.

Hypothesis 1: Effects of cognitive channeling

With regard to the cognitive responses focused on the relationship between immigration and crime, a significant effect of the frame type was observed ($F_{\text{frame}}(1,161) = 219.50, p < .001, \eta^2 = 0.577$): The subjects exposed to the news story with a conflict frame had more cognitive responses focused on the link between immigration and crime than the subjects exposed to the frame of economic consequences (See Table 1). Moreover, a significant interaction effect was observed between the independent variables ($F_{\text{frame} \times \text{group cue}}(1,161) = 4.59, p < .034, \eta^2 = 0.028$). When the news story emphasized a frame of positive economic consequences, more cognitive responses focusing on conflict were generated if the immigrants in question were Moroccan rather than Latin American (Figure 1).

Significant effects according to frame type were also observed ($F_{\text{frame}}(1,161) = 117.96, p < .001, \eta^2 = 0.423$), as well as a nonsignificant interaction effect ($F_{\text{frame} \times \text{group cue}}(1,161) = 3.26, p < .073, \eta^2 = 0.020$) regarding the percentage of cognitive responses centered on positive economic consequences. Students who read the news story with the economic consequences frame wrote more responses related to the economic contribution of immigrants than those who read the news story with the conflict frame. Furthermore, in regard to the news story with the focus on economic consequences, more cognitive responses focusing on a positive contribution of immigrants were generated when the immigrants in question were of Latin American rather than Moroccan origin (Figure 2).

Table 1 Effect of Frame Type and Group Cue on the Cognitive Responses

Main and Interaction Effects	Conflict CR		Econ. Conseq. CR		Polarity CR	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
News frame						
Conflict	52.26	26.05	4.04	10.90	-0.16	0.52
Econ. conseq.	5.09	13.24	43.18	31.63	0.32	0.41
$F_{\text{frame}} (1,161)=$	219.50**		117.96**		45.31**	
Group cue						
Moroccans	27.18	28.66	20.11	26.73	0.01	0.47
Latin Americans	30.51	34.09	27.00	34.04	0.13	0.58
$F_{\text{group cue}} (1,161)=$	0.88		3.92*		3.09 ⁺	
News frame × group cue						
Conflict, Moroccans	47.40	24.23	3.73	11.57	-0.19	0.45
Conflict, Latin Americans	57.23	27.19	4.35	10.31	-0.14	0.58
Econ. conseq., Moroccans	6.97	15.44	36.49	27.62	0.22	0.39
Econ. conseq., Latin Americans	3.12	10.28	50.28	34.30	0.42	0.41
$F_{\text{frame} \times \text{group cue}} (1,161)=$	4.59*		3.26 ⁺		1.08	

⁺*p* < .10. **p* < .05. ***p* < .001.

Note: *Conflict CR* = Percentage of cognitive responses centered on the relationship between immigration and crime. *Econ. conseq. CR* = Percentage of cognitive responses linking immigration to the country’s economic progress. *Polarity CR* = Polarity index of the cognitive responses in relation to immigration, from -1 (negative cognitive response) to 1 (positive cognitive response).

Audience frame: % Conflict Cognitive Responses

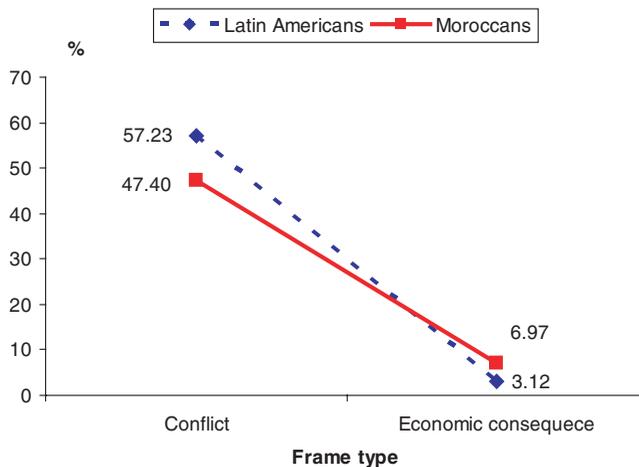


Figure 1 Effect of frame type and group cue on the percentage of cognitive responses centered on the “immigration-crime” association.

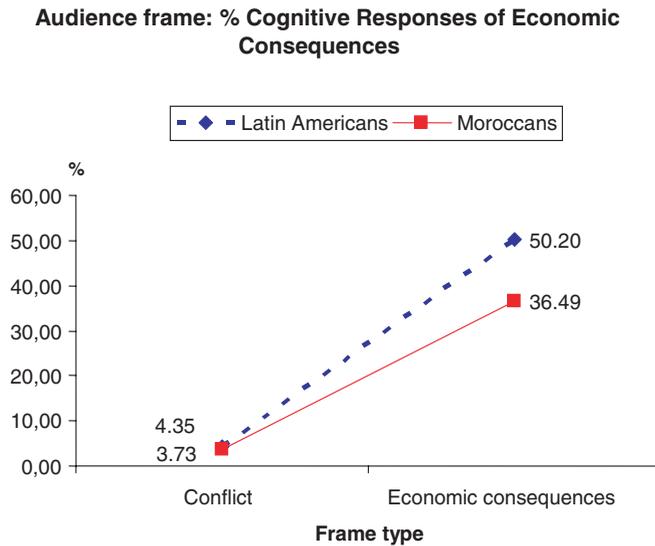


Figure 2 Effect of frame type and group cue on the percentage of cognitive responses centered on the immigrants' positive economic contribution.

Statistically significant differences were observed in the polarity of the cognitive responses according to frame type ($F_{\text{frame}}(1,161) = 45.31, p < .001, \eta^2 = 0.220$). Students who had read a news story with a conflict frame generated more critical comments about immigration than those exposed to a news story emphasizing immigrants' economic contribution. However, the interaction effect was not statistically significant ($F_{\text{frame} \times \text{group cue}}(1,161) = 1.08, p = .299, \text{observed power} = 0.179$).

Hypothesis 2: Attitudinal effects

In accordance with the hypothesis posed, statistically significant differences were observed in the perception of the importance of immigration as a problem for the country as a function of the frame type ($F_{\text{frame}}(1,171) = 6.59, p < .011, \eta^2 = .037$). Students exposed to the news story linking immigration and crime gave more importance to immigration as a problem than those exposed to the news story highlighting the positive economic consequences (see Table 2).

A significant effect was observed in attitude toward immigration as a function of frame type ($F_{\text{frame}}(1,171) = 6.77, p < .010, \eta^2 = .038$) and a significant interaction effect was also observed between the independent variables ($F_{\text{frame} \times \text{group cue}}(1,171) = 4.40, p < .037, \eta^2 = .025$). Students exposed to the news story that emphasized immigrant's economic contribution to the country showed a more positive attitude than the subjects exposed to the news story with a conflict frame. However, this main effect of news frame type was moderated by the origin of the immigrants: For the news story highlighting the economic contribution of immigration, the participants showed more positive attitudes if the immigrants in question were of Latin American rather than Moroccan origin (see Figure 3).

Table 2 Effect of Frame Type and Group Cue on the Perception of the Importance of Immigration as a Problem to the Country, Attitude, and Beliefs About the Consequences of Immigration

Main and Interaction Effects	Im. as Pro.		Attitude		Neg. belief		Pos. belief	
	M	SD	M	SD	M	SD	M	SD
News frame								
Conflict	8.31	1.67	5.32	2.34	2.97	0.77	3.41	0.79
Econ. conseq.	7.59	2.09	6.07	1.63	2.84	0.79	3.70	0.50
$F_{\text{frame}}(1,171)=$	6.59*		6.77**		1.14		8.29**	
Group cue								
Moroccans	7.86	1.88	5.95	1.93	2.90	0.79	3.61	0.61
Latin Americans	8.05	1.98	5.41	2.14	2.91	0.78	3.50	0.78
$F_{\text{group cue}}(1,171)=$	0.41		3.11 ⁺		0.01		1.02	
News frame × group cue								
Conflict, Moroccans	8.07	1.73	5.87	2.12	2.95	0.77	3.57	0.71
Conflict, Latin Americans	8.59	1.58	4.71	2.45	2.98	0.78	3.25	0.85
Econ. conseq., Moroccans	7.66	2.02	6.02	1.75	2.84	0.82	3.64	0.50
Econ. conseq., Latin Americans	7.51	2.20	6.12	1.50	2.84	0.77	3.76	0.60
$F_{\text{frame} \times \text{group cue}}(1,171)=$	1.34		4.40*		0.02		4.48*	

⁺ $p < .10$. * $p < .05$. ** $p < .01$.

Note: *Im. as Prob.* = Perception of the importance of immigration as a problem to the country, from 0 (*not at all important*) to 10 (*very important*). *Attitude* = Attitude toward immigration, from 0 (*very negative*) to 10 (*very positive*). *Neg. belief* = “Immigration favors an increase in crime and unfair competition for Spanish workers” (from 1 = *totally disagree*, to 5 = *totally agree*). *Pos. belief* = “Immigration contributes economically to the country” (from 1 = *totally disagree*, to 5 = *totally agree*).

The positive belief “immigration contributes economically to the country” was significantly affected by frame type ($F_{\text{frame}}(1,171) = 8.28, p < .004, \eta^2 = 0.046$). A significant interaction effect was also observed ($F_{\text{frame} \times \text{group cue}}(1,171) = 4.48, p < .036, \eta^2 = 0.026$). Thus, the participants exposed to the news story underscoring immigrants’ economic contribution showed greater agreement with this belief than those exposed to the news story linking immigration to crime. This effect was moderated by the origin of the immigrants, so that they were in greater agreement with this belief when facing a news frame of positive consequences if the immigrants were Latin American than if they were Moroccan (see Figure 4).

Discussion

The results of this study provide important support for the hypotheses posited: The type of frame stressed in a news story has a significant effect on cognitive channeling, on the perception of the importance of immigration as a problem, on attitude toward

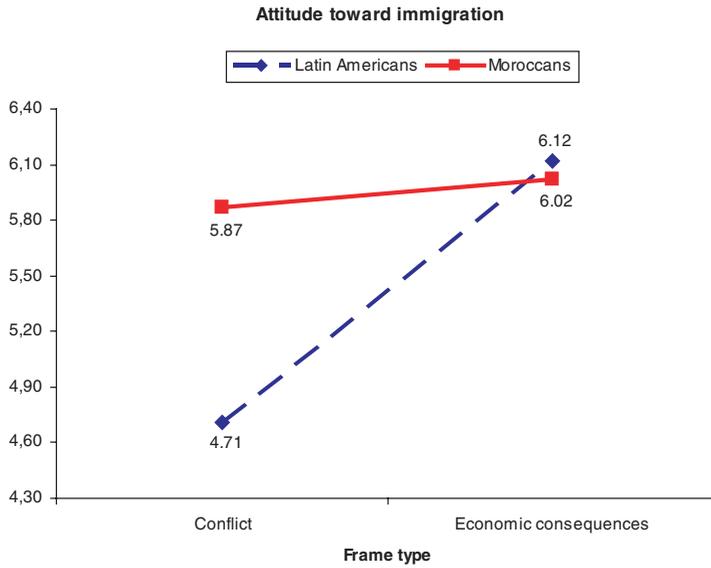


Figure 3 Effect of frame type and group cue on attitude toward immigration.

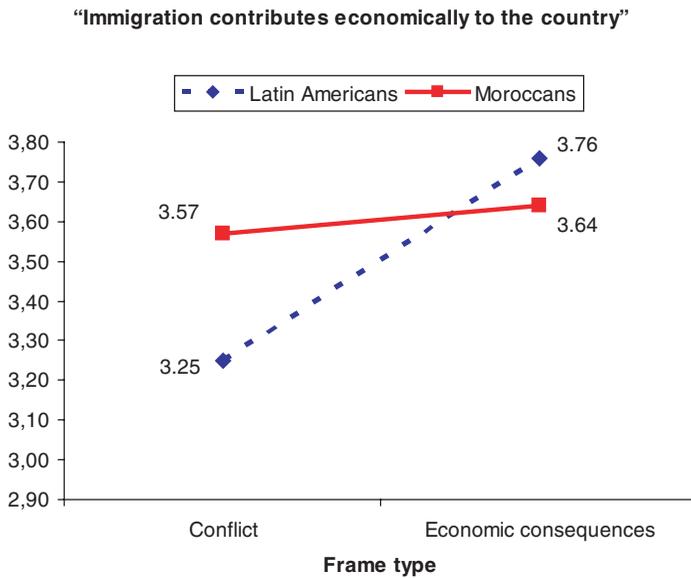


Figure 4 Effect of frame type and group cue on the belief “immigration contributes economically to the country.”

immigration and on beliefs about the consequences of immigration for the country. These results show that the way news on immigration is focused generates cognitive and attitudinal effects, which in turn is convergent with the results of previous

research studies on the framing effect (Domke et al., 1999; Nelson, Clawson et al., 1997; Price et al., 1997; Shah et al., 2004; Shen, 2004a; Valkenburg et al., 1999).

This study has confirmed that the way immigration is framed in the experimental news story used influences the perception of immigration as a problem, that is, the salience or importance of immigration. According to McCombs (2004), certain ways of describing an object (in this case, immigration) can be more convincing than others when generating the importance of that object. The hypothesis of compelling arguments posits that certain frames in the presentation of news topics can exert a powerful influence on the salience of these topics (McCombs, 2004; McCombs & Ghanem, 2001). Moreover, it has been noted that crime can act as a *sensitive key* to which the public responds powerfully. Aday (2006) has observed that news frames produce a dual effect (“frame-setting effect”): They affect the transfer of the salience (importance) of the object and cognitive channeling and attitudes. The outcomes of the present research can be interpreted taking into account the “compelling arguments” hypothesis, since when immigration was linked to crime as opposed to economic growth, the perception of immigration as an important problem for the country increased.

Partial empirical support was obtained for the hypothesis that posed a differential effect of news frames as a function of the information included on the origin of the immigrants in the news story. Thus, the news story with the frame of positive economic consequences that referred to immigrants of Moroccan origin (as compared to the same text referring to Latin American immigrants) made more salient in the individuals the cognitive responses focused on conflict, stimulated fewer cognitive responses relating to the positive economic consequences frame, fostered a less positive attitude toward and induced a lesser degree of agreement with the belief that “immigration contributes economically to the country.” The implications deduced from these outcomes are particularly important because they indicate that the inclusion of *peripheral* elements, such as alluding incidentally to immigrants whom the population is already prejudiced against, can condition the impact of news frames on attitudes and beliefs concerning immigration. These results are in agreement with those obtained by Brader et al. (2004) and by Cho et al. (2006). The present research contributes to the debate over the processes responsible for the framing effect (explanatory processes), showing that peripheral route processing (e.g., by applying heuristics) can also be a relevant process for understanding how the framing effect is produced. It must be taken into account that the research study was carried out in a region with a low density of immigrant population and the participants manifested a low level of contact with immigrants, and therefore most likely had a low level of involvement with the issue of immigration. Future research should attempt to verify to what extent the interaction effect observed between the frame type stressed in the news story and reference to the origin of the immigrants in question (group cue) is moderated by subjects’ involvement with the issue. To do this, one could take as an indicator of involvement the immigrant population density where the experimental subjects live or else experimentally manipulate the

subjects' level of involvement through reception instructions (see, e.g., Igartua, Cheng, & Lopes, 2003). Moreover, a future study should use more diverse samples of participants instead of relying solely on college students and include as well a control condition, in which individuals are to be exposed to a news story not related with immigration (e.g., embedding an on-line experiment in a national survey) (e.g., Iyengar & Hahn, 2007).

A series of limitations to this study must be pointed out. In the first place, there is a limitation related to the construction of the experimental news story used in the study. In the news story with a conflict frame (which stressed the connection between immigration and crime), a specific criminal incident was narrated: the murder of a young Spaniard at the hands of an immigrant. The news story with the positive economic consequences frame, however, did not offer any specific information; rather, it alluded in general to abstract matters linked to the positive effects of immigration, such as the rejuvenation of the working population or the social and economic development of the city. In this sense, the incident related to a criminal act was more vivid (Nisbett & Ross, 1980) than the information contained in the news story stressing the positive economic consequences of immigration for the receiving society. This may have had an influence on the impact of the news frames on the dependent variables and may cast doubt on the hypothesis of the heuristic processing of news frames (Zillmann & Brousius, 2000). Moreover, it has also been observed that news stories about negative events, as opposed to news stories containing positive events with respect to the same topic (e.g., economic changes), have asymmetric effects: negative news is not only more present in the media but also has a greater impact on attitudes toward and perception of socioeconomic problems (Soroka, 2006). Furthermore, research in social psychology has also shown that there is an asymmetry in how individuals respond to positive and negative facts: Information on negative events activates and focalizes attention more, exerts a greater impact when forming or making a judgment, causes greater activity in the search for explanations, fosters greater reflection or reflective processing and in general has a greater impact than positive information of the same degree of intensity (Taylor, 1991). Thus, future research should control the level of vividness and negativity of the information used to create the different news frames.

Second, the experimental news story used in our research was not accompanied by any graphic material; in future studies it would be advisable to test the impact of including this kind of element, because news frames are also manifested through visual resources (e.g., de Vreese, 2004; Nelson & Oxley, 1999) and on occasion have a greater impact, as evidenced in the commonplace: "a picture is worth a thousand words" (Coleman, 2006; Coleman & Banning, 2006; Messaris & Abraham, 2001; Pfau et al., 2006). Images (photographs or video) are a basic component of news production, add importance to an event and also contribute authenticity and credibility to the information (Messaris & Abraham, 2001; Wanta, 1988). However, the information delivered through images may determine the perception, interpretation, memorization, and evaluation of news and increase its emotional

impact (Gibson & Zillmann, 2000; Pfau et al., 2006). For these reasons, the analysis of the effects of pictures of immigrants (of different origin or carrying out different activities) should be examined in future studies. According to Coleman (2006), the presence of photographs in a news story can act as a peripheral cue and can stimulate reflection or cognitive elaboration.

A future research line on framing and immigration (complementary to the one shown herein) should focus on the analysis of factors related to the norms and practices of journalism in Spain, which may condition the treatment of immigration in the Spanish media, especially given the link between news production processes and the discourse of political elites in the Spanish context (Hallin & Mancini, 2004). In this sense, the constructivist approach of Van Gorp (2007) could be of great help in positing future studies about news frame building around the topic of immigration. In that respect, it must be recognized that research on framing attempts to explain how individuals process, interpret and are influenced by news information, but it is also true that the essence of the framing process is based on social interaction: Journalists interact with their sources and other actors in the public sphere, and the receivers interact with the media contents and in turn, with each other. Thus, taking as a reference this interactive character in the framing process, it can be assumed that during the process of news frame building, journalists' conscious and unconscious selection of a determined frame in order to focus some issue (like immigration) comes from the cultural *storage* of frames (although of course it will be influenced by other factors coming both from within and outside the media organizations they work for). This approach, which has not been touched on in this study, should be taken up in future studies in order to obtain a more complete understanding of the news frame building process with regard to immigration in receiving societies, like Spain at the present moment.

Finally, although Mancini (2005) has explained certain particular traits of professional journalism in countries of continental Europe, it can still be seen that the way in which journalists produce news about cultural minorities and immigrants in Europe seems to follow a similar pattern. The media reproduce the racist discourse of elite institutions in defense of European values, that is, freedom (apparently "unlimited" in the press) and democracy, with certain immunity. In a report on racism and intolerance presented before the European Commission, van Dijk (2006) summarized the most significant research findings on journalistic practice when covering minorities and immigration in the European press: (a) discrimination against journalists pertaining to minority groups in accessing the profession; (b) lack of diversity in production routines (in locating relevant information and selection of sources); (c) lack of multicultural professional training for journalists; (d) high presence of biased news stories as a consequence of Eurocentric prejudice and characterized by "emphasize our good things, and their bad things" and "de-emphasize our bad things, and their good things"; and, (e) empirical proof of the negative effect that this kind of information treatment has on the audience or receivers of biased news information. Considering the results of the experimental study presented here, and

their clear convergence with the conclusions of van Dijk (2006), we would point out the following recommendation for journalists in a world in which international migrations are turning into a daily phenomenon: If we wish to attain an adequate and full integration of the immigrant population into the receiving societies, in their daily practice journalists should make an effort to control the transmission of threatening stereotypes that link immigration to crime. This means including a greater variety of news on immigrants, avoiding a predominance of negative news stories (the case until now), which, as we have seen, generate significant cognitive and attitudinal effects. Furthermore, the empirical evidence indicates that in a context of information consonance (Peter, 2004) the influence of the media is greater than in a situation of information diversity. Thus, future research should also look into the effects of the coverage and informational treatment of immigration, with correlational designs using the research paradigm of the theoretical perspective of *Attribute Agenda Setting* (e.g., Kim & McCombs, 2007; McCombs, Lopez-Escobar & Llamas, 2000).

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Notes

- 1 The research was carried out in the city of Salamanca, in the autonomous region of Castile & Leon, Spain. This region has a low population density of foreign immigrants, at 4%, whereas the national mean in Spain was 8.7% in 2006 (INE, 2006).
- 2 The overall mean in the level of contact with immigrants was 2.10 ($SD = 1.30$), slightly lower than the theoretical midpoint of the variable (2.5), which ranged from 0 to 5 ($t(177) = -4.01, p < .001$). This suggests a low level of contact with the immigrant population, a result that is consistent with what was expected given the sociodemographic characteristics of the region of Castile & Leon, with a low density of immigrant population as compared to Spain as a whole (INE, 2006).

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