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Attitudinal impact and cognitive channelling of immigration stereotypes through the news

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Abstract

Introduction: Based on research on the framing effect and research on the treatment of immigration, the processes of reception and impact of news about crime are analyzed. **Method:** We conducted two experimental investigations in which participants were exposed to a news story and later filled in a questionnaire with self-report scales. Two independent variables were manipulated: the mention of protagonists’ national/ geographic origin in the news story and the involvement with the topic. **Results:** The study indicates that when the involvement with the news story is low, the presence of information about the nationality of the protagonist exerted an indirect effect through attitudinal impact. However, when involvement is high, the indirect effect is explained by the activation of trains of thought which influence the formation and/or reinforcement of negative beliefs about immigration. **Conclusions:** The results are consistent with a dual model of news framing effects and reinforce the recommendations made by some organisations about not reporting the nationality of the protagonists of a criminal act in news programmes.

Keywords: News framing effect; group cue; involvement; immigration; experimental research; mediational analysis.

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1. Introduction

The Audiovisual Council of Catalonia was perhaps the first Spanish organisation to outline the way the media should report about immigration. The specific recommendations directed to media professionals included two that are relevant to the context of the studies presented here: 1) emphasis on references to issues such as the *nationality or skin colour of the protagonists* of news stories often does not add relevant information to the story, is not strictly necessary to understand the event and, instead, *reinforces prejudices* and acts as an *implicit interpretation cue* with negative or condemnatory intentions, and 2) similarly, and without having to systematically renounce to collective naming, *it is not acceptable to associate an ethnic minority or a concrete group of immigrants with a particular illegal activity*, which can end up being considered by the audience

almost as an attribute or characteristic of the group in question [1]. Moreover, OBERAXE (the Spanish Racism and Xenophobia Observatory) has also stated that associations between immigration and crime and negative activities should be avoided (Sendín and Izquierdo, 2008).

The two experimental studies presented in this article reveal the mechanisms (attitudinal and cognitive mediating processes) that explain the impact of the reference to the nationality of the protagonists of a news story about a criminal act on people's stereotypical beliefs about immigration, taking as a reference the research on framing effects and the role of the peripheral cues in the processing of journalistic information. The results from both studies allow us to advance a theoretical model on the socio-cognitive effects of news framing (a dual model for news framing effects) and to empirically support the recommendation of not mentioning the nationality of the protagonists in the reporting of criminal acts.

1.1. Mechanisms of framing effects

Tankard (2001) argues that framing a news story involves: a) addressing an issue in a certain way or from a certain perspective; b) setting an agenda of attributes; c) choosing certain keywords to make a discourse; d) manipulating the salience of certain elements or traits (giving emphasis to some of them); and e) formulating a central organising idea. Entman (1993), on the other hand, believes that framing "is to select some aspects of the perceived reality and to make them more prominent in a communicative text, in a way that promotes certain definitions of problems, causal interpretations, moral assessments and/or recommendations for the treatment of the issue described" (p. 52). Other authors have pointed out that the study of news framing (and its effects), is directly linked to the so-called second-level agenda setting theory (McCombs, López-Escobar and Llamas, 2000; McCombs and Reynolds, 2002). From this perspective, news framing manipulate the *salience* of certain elements or attributes with respect to an issue or event (McCombs and Reynolds, 2002). In short, framing information in a news story is related to two basic operations: selecting and emphasising words, expressions and images, to attach a point of view, a perspective or a certain angle to a news story (de Vreese, 2003).

News frames can play different roles, and particularly act as *dependent* and *independent variables* (de Vreese, 2003; Scheufele, 1999). First, understood as dependent variables, frames are contained in the news and are the result of their processes of production. As independent variables, frames are conceived as properties of the news texts, capable of affecting the processes of reception and the impact of those news texts. This line of research is linked to framing effects analysis (Iyengar, 1991; de Vreese, 2003; Price and Tewksbury, 1997; Scheufele, 2000). Scheufele (2000) points out that news framing can influence people's thoughts (in their cognitive responses) and, therefore, can *influence* people's perception of the subject matters addressed in a news story; they can also have a considerable effect on *the way of thinking* about the social world and produce a change or an impact on perceptions and attitudes through subtle alterations in the definition of a problem in a news story. Finally, news framing may influence emotional responses or reactions, i.e. the way an issue is represented in a news story will induce different emotions towards this issue (Gross and Brewer, 2007; Gross and D'Ambrosio, 2004; Igartua, Moral and Fernández, 2011).

The current debate in this field focuses on analysing the explanatory mechanisms of news framing effects [2] (Igartua and Cheng, 2009; Price and Tewksbury, 1997; Scheufele, 2000). Matthes (2007) indicates that most of the theories about framing effects have been based on the concept of accessibility (memory-based model). However, framing effect theory also contends that this effect is

linked to the applicability of the knowledge that is activated during news reception, i.e. with the activation of "trains of thought" that spontaneously influence the formation of attitudes and beliefs, thanks to the emphasis put on certain attributes in the news story (on-line model) (Price and Tewksbury, 1997; Price, Tewksbury and Powers, 1997). A third position considers that the framing effect is linked to the processes of persuasion and, in this context, it has been proposed that this effect may be ruled by the heuristic processing (Igartua and Cheng, 2009; Igartua, Moral and Fernández, 2011; Perse, 2001; von Sikorski and Schierl, 2012). This means that the impact of news framing would be related to the activation of cognitive processes that do not involve a comprehensive analysis of information, i.e., with the activation of mental shortcuts and *attitudinal modelling* processes, so that the implicit attitude in the news is automatically assimilated, without causing a reflection or elaboration processes on individuals. Thus, it is considered that when people are not particularly motivated to process information (which could be the default position, given the low rates of information retention; Machill, Köhler and Waldhauser, 2007) the presence of peripheral cues in the news message can condition the socio-cognitive effects.

Perse (2001) has indicated that the framing effect could be explained with the Elaboration Likelihood Model (ELM), by Petty and Cacioppo (1986), based on peripheral processing. The ELM proposes that two different routes are responsible for attitudinal change: a central processing route and a peripheral processing route. The central route means that the receiver of the message tries to perform a critical and thorough evaluation of the message. This kind of systematic processing takes place when people faces contents that arouse great interest in them or contents with which people maintain a high involvement because they are considered to be important issues. The main mechanism of attitudinal change in this context is the amount and type of cognitive responses made by individuals (what and how much is reflected upon during the processing of the message). On the other hand, the peripheral processing route is superficial and automatic, and is based on peripheral cues (who says what, how is this said, etc.) and is activated when individuals are exposed to low-involvement messages, i.e. messages dealing with issues that do not arouse interest or are considered to be little relevant from a personal point of view. In this context, the heuristic processing (which operates through the peripheral route) refers to the application of simple decision-making rules over non-central aspects of the message (for example, "if the news story is published by a quality newspaper, instead of a tabloid, it is more likely that the news will be true and verified").

A peripheral cue in the context of the news about immigration is the allusion to the nationality of immigrants (group cue) (Brader, Valentino and Suhay, 2008). In this context, Igartua and Cheng (2009) observed that the incidental inclusion of the nationality of immigrants (Moroccans in comparison to Latin Americans), in the context of a news story about the consequences of immigration for Spain, worsens prejudice and reinforces negative attitudes and beliefs towards immigrants in general. These results converge with studies on the role of (textual and visual) cues on the ethnicity or nationality of the protagonists of the news stories in the activation of stereotypes (e.g., Gilliam, Iyengar, Simon and Wright, 1996; Peffley, Shields and Williams, 2001). It has been observed that the manipulation of the ethnicity of a suspect (African-American *versus* white) in the context of a news story about crime influences concern for crime and attributions about its causes (Gilliam et al., 1996) and distorts the assessment of the suspect (Peffley et al., 2001). From this cognitive framework, it is considered that news have a cognitive influence because most of the times, in the interaction with journalistic content, people operate with low motivation and processing capacity. Under these conditions, the heuristic processing ends up being dominant (in comparison to the systematic processing). Therefore, one the main effects of news consumption is that it facilitates

the *access* to certain information and, thereby, it stimulates a more superficial processing (through the application of heuristics) of the social world (Perse, 2001).

But what happens when involvement with the subject matter of the news story is high? What role do peripheral cues play in this context? Firstly, it should be argued that if news were processed in a systematic way (via the central route) the effects of the peripheral cues (such as the reference to the nationality or ethnicity of the news' protagonists) would be little relevant, since what is really important in this context is the amount and type of reflection, which is in turn determined by the quality of the information contained in the news story. Thus, when there is a systematic processing of information, the impact of news framing is explained by cognitive mediation; i.e., cognitive responses will perform a mediating role. However, being highly involved with a subject matter does not guarantee an objective processing of the information. According to the ELM, involvement with the subject matter of a news story determines not only the *degree* or intensity of reflection (how much is reflected during the exposure to the message), but also affects the *direction* of the reflection (Petty, Priester and Wegener, 1994).

It has been noted that there may be two types of cognitive processing: objective and biased. The objective cognitive processing implies that the individual will carry out a thorough and critical analysis, taking into account the evidence presented in the message. This type of processing will be guided by data (bottom-up processing) since it is assumed that elaboration is relatively unbiased. On the other hand, biased cognitive processing will be triggered in circumstances where the assessment of the evidence included in the message does not constitute a central element for the individual. In this way, people process communication guided almost exclusively by the schema, the attitude or prior knowledge on the subject and aim to maintain consistency in their belief system and to defend their initial attitudes (top-down processing). From this point of view, it can be assumed that the presence of a peripheral cue in the context of a news story about a criminal act (for example, the revelation that criminals are immigrants or belong to certain country) would promote a skewed cognitive processing, producing a process of cognitive channelling. In this way, the peripheral cues can influence the direction of cognitive responses and these, in turn, can induce a greater impact on opinions or beliefs.

1.2. Objectives and hypotheses

The main objective of the two studies presented here is to compare the differential effect of the inclusion of information on the nationality of criminals (group cue) in a news story about a criminal incident in people with low and high involvement with the reported event. It is assumed that the framing effect can be explained by taking into account the same mechanisms that explain the attitude impact caused by persuasive messages. Thus, the presence of peripheral cues is considered an element that is, routinely, used to build news stories that link immigration with crime, to such an extent that it has become a characteristic feature of this type of news framing of immigration. In this context, it can be hypothesised that the effect of the reference to the nationality of the criminals in a news story about a criminal incident could be explained by different mechanisms that depend on individuals' degree of involvement.

Personal involvement refers to the intrinsic importance that a particular issue or event has for a person (Johnson & Eagly, 1990). If individuals believe that the issue addressed in a news story may have important consequences for their own life, we are talking about a message with high involvement. On the other hand, if the issue or event does not affect individuals, this message will

lack relevance. Given that involvement with a subject is a situational variable, its experimental manipulation is possible. In the two research studies presented here, involvement has been manipulated by changing the context in which the events were narrated in the news story: close and high involvement (the criminal incident occurred in the same city in which the individual lives) or far and low involvement (the incident took place in a distant city, part of another autonomous community). This manipulation of the involvement through subtle alterations in the text is the usual procedure used in persuasion research (Igartua, Cheng and Lopes, 2003; Petty and Cacioppo, 1986).

In this way, individuals exposed to a low-involvement news story "would be led" by its peripheral cues (the reference to the nationality of the criminals), and it would have a greater impact on their attitudes, beliefs and emotions towards immigrants. Based on this premise, the following hypotheses were formulated:

H1: In a news story about a criminal act, the inclusion of information about the nationality of the criminals (defined as immigrants) will stimulate a more negative attitude towards immigration only when low involvement is induced in participants (study 1).

H2: In a news story about a criminal act, the presence of information about the nationality of the criminals (defined as immigrants) will produce a greater degree of agreement with the negative and stereotypical beliefs about the consequences of immigration only when low involvement is induced in participants (study 1).

H3: In a news story about a criminal act, the presence of information about the nationality of the criminals (defined as immigrants) will cause a greater experience of negative emotions towards immigrants and lower intensity of positive emotions, only when low involvement is induced in participants (study 1).

The second objective of both studies is to analyse the mechanisms or mediating processes that explain the impact of the reference to the nationality of the protagonists of the news story in the formation and/or reinforcement of stereotypical beliefs about immigrants. We expected the effect of the reference to the nationality of the protagonists of the news story to be different among people with low and high involvement with the subject matter of the news story. In people with low involvement, the reference to the nationality of the protagonists of the news story will act as a peripheral cue, so that it will trigger a negative attitude towards immigration and this attitude will be associated in turn to a greater degree of agreement with the negative and stereotypical beliefs about immigration. In contrast, in people with high involvement, the presence of this information will distort the information processing, i.e., it will have an effect that is based on the activation of a cognitive channelling process which will in turn produce greater agreement with the stereotypical beliefs about immigration. In this sense, the following hypotheses were formulated:

H4: The effect of the reference to the nationality of the protagonists of the news story on the stereotypical beliefs on immigration will be mediated by the attitudes towards immigration, but only when the involvement with the subject of the news story is low (study 1).

H5: In a news story about a criminal act, the presence (*versus* absence) of information on the nationality of the criminals (defined as immigrants) will have an effect of cognitive channelling and will produce more critical cognitive responses to immigration, but only when the involvement with the subject of the news story is high (study 2).

H6: The effect of the reference to the nationality of the protagonists of the news story on the stereotypical beliefs on immigration will be mediated by the cognitive responses raised by the

reading of the news story, but only when the involvement with the subject of the news story is low (study 2).

2. Study 1

2.1. Method

Study 1 consisted of an experimental investigation, involving 237 students from the Miguel de Cervantes European University (Valladolid^[3]). The average age of the participants was 20.95 years ($DT = 2.52$; 18 to 36 years) and 47.3% of them were women.

We used a 2 x 2 between-subjects design, based on two experimental manipulations applied to a news story about a criminal incident. The first independent variable was associated with the manipulation of the group cue, i.e., the reference in the news story to the nationality of the protagonists of the criminal incident, establishing two conditions: “the nationality of the criminals is not mentioned” versus “the immigrant nature of the criminals is mentioned”. The second independent variable was the *involvement with the subject of the news story*: low (the criminal event took place in Barcelona) or high (the criminal event took place in Valladolid, the city of residence of the study participants).

The dependent variables were evaluated by means of a split-ballot questionnaire. The study was carried out in several classrooms of the Miguel de Cervantes European University of Valladolid. Participants were randomised to the four experimental conditions. The cover of the administered questionnaire included information about the objectives of the study. The second page included the experimental news story which had the same headline in the four conditions: “Woman in critical condition after being brutally attacked by two thieves who raided her home”. The news story used in the study was based on a real story that had been published with the same headline in the print version of *El País* newspaper on 18 June, 2006^[4] (only 5.5% of the participants stated that they had already read the news story before). After the experimental news story was read, participants had to answer the questionnaire including the dependent, manipulation-check, and control variables:

Emotions felt during the reading of the news story (Igartua et al., 2003). We used a scale consisting of 10 items referring to different emotions (interest, joy, surprise, sadness, anger, disgust, contempt, fear, shame and guilt). Participants had to indicate to what extent the reading of the news story had made them feel these emotions, ranging from 1 (“nothing”) to 5 (“a lot”).

Evaluation of the news story. We used a semantic differential comprised of 9 bipolar 7- point scales with antonyms in their extremes: “clear-confuse”, “easy to reading-difficult to read”, “deep-superficial”, “objective-biased”, “complex-simple”, “contextualised-out of context”, “imprecise-rigorous”, “attractive-repulsive” and “entertaining-boring”.

Interest aroused by the news story. Participants were asked to “assess the degree of personal interest aroused by the news story” (from 0 “no interest” to 10 “great interest”).

Attitude towards immigration. Participants were asked: “As you know, all developed countries receive immigrants. Do you think that, in general terms, immigration is more positive or more negative for Spain?” (from 0 “very negative” to 10 “very positive”).

Beliefs about the consequences of immigration. Participants were asked to indicate their degree of agreement or disagreement (1 = totally disagree, 5 = full agreement) towards 8 claims about the consequences of immigration in Spain (Cea d'Ancona, 2004; Igartua and Cheng, 2009): 1) “immigrants carry out jobs that Spaniards do not want to perform”; 2) “Spain still needs immigrant workers”; 3) “the increase in immigration contributes to the increase in crime”; 4) “a society

without immigrants will find it difficult to function and advance"; 5) "there is a close relation between immigration and insecurity"; 6) "the increase in immigrants favours the country's economy"; 7) "when I think about immigrants I think of all the problems they cause"; and 8) "in general, immigrants are contributing to the country's development". Principal components factor analysis (varimax rotation) extracted two factors (69.94% of the variance). The first factor (items 1, 2, 4, 6 and 8) alluded to the belief that "immigration is a necessary contribution to the country" ($\alpha=.85$); the second factor (items 3, 5 and 7) referred to the belief that "immigration contributes to the increase in crime and public insecurity" ($\alpha=.79$).

Emotions felt towards immigrants. This scale is based on the scale of affective subtle prejudice created by Navas, García, Rojas, Pumares and Cuadrado (2006). Participants were asked to state the extent to what immigrants inspired the following emotions in them: fear, admiration, mistrust, insecurity, sympathy, discomfort and indifference (from 1 "nothing" to 5 "a lot"). A principal component factor analysis with varimax rotation, was carried out and extracted two factors explaining 66.97% of the variance: a) negative emotions of fear, mistrust, insecurity, discomfort and indifference ($\alpha=.81$), and b) positive emotions of admiration and sympathy ($\alpha=.76$).

Interest in the subject of immigration. Participants were asked: "how interested are you in the issue of immigration?" (from 1 "nothing" to 5 "a lot"; $M=3.66$, $DT=0.85$).

Participation in discussions about the issue of immigration. Participants were asked the following question: "Have you ever actively participated, by giving your opinion, in conversations or discussions on the issue of immigration?" (from 1 "never" to 5 "many times"; $M= 2.98$, $DT= 1.26$).

Level of contact with immigrants. Participants were asked whether they maintain or had maintained (1=yes, 0=no) some kind of family, friendship, work, school or neighbourhood relation with immigrants (Cea d'Ancona, 2004). An index of personal contact with immigrants was created from the sum of the five dichotomous variables considered ($M= 1.85$, $DT= 1.28$).

The variables "emotions felt during the reading of the news story" and "interest aroused by the news story" were used to compare the effectiveness of the experimental manipulation of the involvement with the news story. The measurement of the *evaluation of the news story* was included to verify the equivalence of the four versions of the news story. The variables "interest in the subject of immigration", "participation in discussions about the issue of immigration", "level of contact with immigrants", along with the sex and age of respondents, were considered as control variables and were included to assess the effectiveness of the randomisation of participants of the experimental conditions. Finally, the variables "attitude towards immigration", "beliefs about the consequences of immigration" and "emotions felt towards immigrants" constituted the dependent variables of the study.

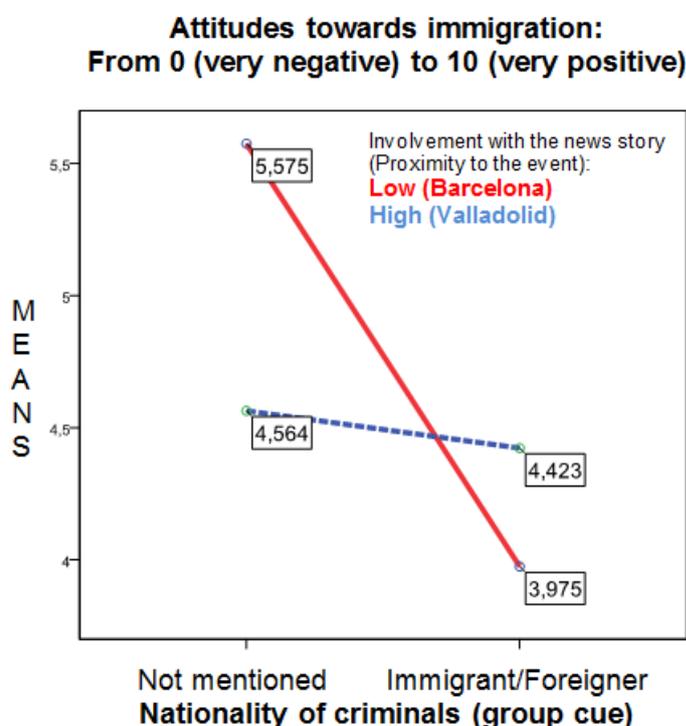
2.2. Results

First, we carried out a one-way analysis of variance that included the experimental *condition* [5] as the independent variable and the nine indicators of the evaluation of the news story as dependent variables. The results showed that there were no statistically significant differences between the four versions of the experimental news story in any of the evaluation variables of the news story (in all analyses $p > .220$). These results indicate that the four experimental news stories, despite containing two manipulations, did not generate differences in terms of their general assessment and therefore behaved as homogeneous stimuli. Significant differences were neither observed among the four experimental groups according to sex, age, political self-positioning interest in the subject of immigration, participation in conversations about the issue of immigration and the level of contact

with immigrants (in all analyses $p > .250$). Therefore, it can be concluded that the randomisation of participants to the conditions was successful and led to the formation of four homogeneous groups in relevant variables.

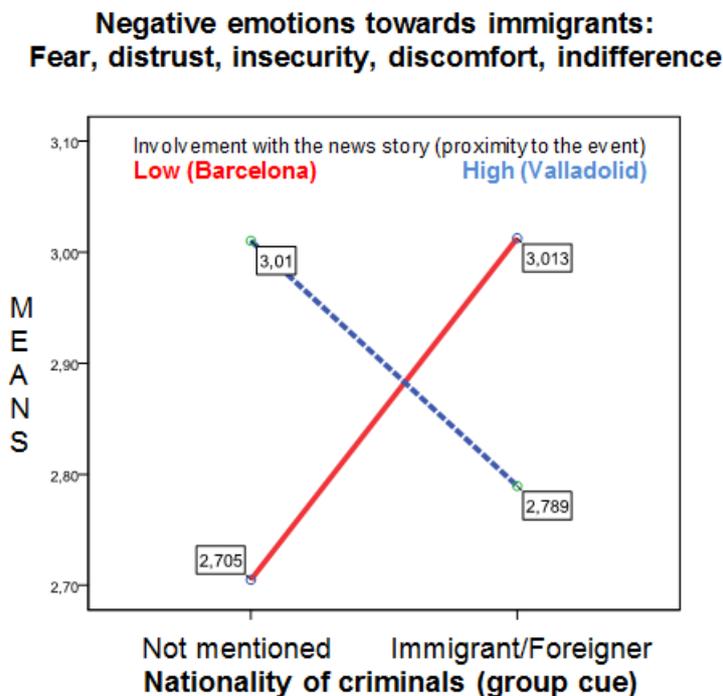
In order to compare the efficacy of the manipulation of involvement, we explored the effect of that variable in the interest aroused by the news story and in the intensity of the experienced emotions. There were no significant differences in the interest or the intensity of the emotions provoked by the reading of the news story depending on the different levels of involvement (in all analyses $p > .120$). As a result of these findings, it can be concluded that the manipulation of the involvement with the news story did not produce the expected effect on participants, so that the news stories located in Valladolid and Barcelona led to the same pattern of emotions and the same degree of interest. Despite this, we proceeded to test the hypotheses.

Figure 1. Effect of information on the nationality of criminals and the involvement with the issue of the news story on the attitudes towards immigration



To test hypothesis 1 we carry out a single factor analysis of variance for a 2 x 2 design of independent measures, being “attitude towards immigration” the dependent variable. We observed a statistically significant interaction effect between the two independent variables ($F(1, 233)=4.36$, $p < .038$, $\eta_p^2 = .018$), which confirms H1 and shows that among participants with low involvement, the effect of the mention about the criminals’ nationality (to highlight that they were immigrants) on attitudes toward immigration was higher than among participants with high involvement (Figure 1). However, with regards to the negative belief that “immigration contributes to the increase in crime and public insecurity” there was no a significant interaction effect between the two independent variables, so hypothesis 2 did not receive empirical support.

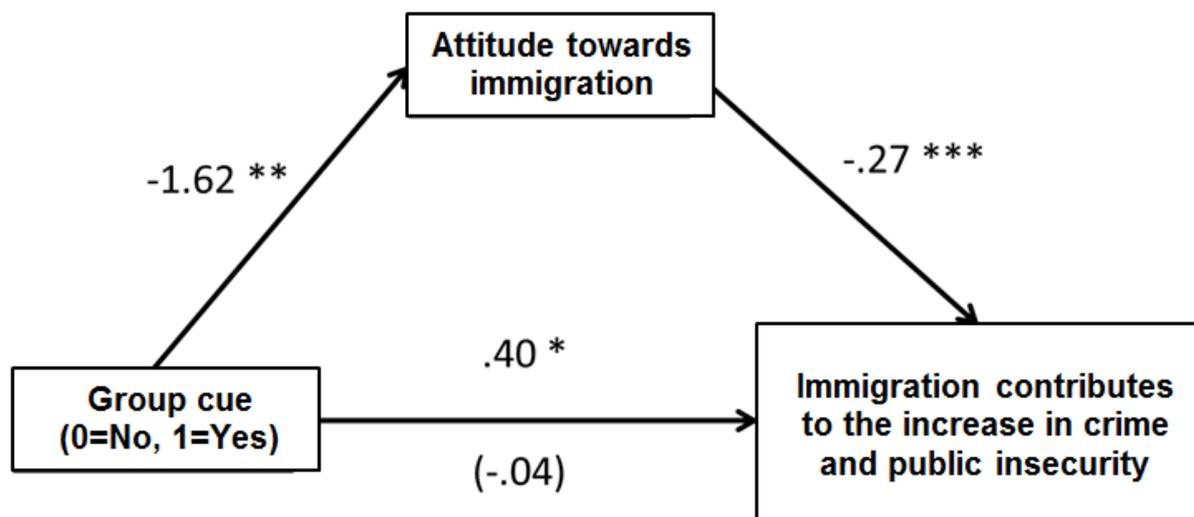
Figure 2. Effect of information on the nationality of criminals and the involvement with the issue of the news story on the negative emotions toward immigrants



In terms of the impact on the emotions towards immigrants, there was a statistically significant interaction effect between the two independent variables ($F(1, 230) = 4.61, p < .033, \eta_p^2 = .020$) on the negative emotions towards immigrants (fear, mistrust, insecurity, discomfort and indifference). Participants with low involvement reported more negative emotions towards the immigrants when they read a news story indicating that the criminals were foreign, in comparison to the participants that read the news story that did not include this information (Figure 2).

To test hypothesis 4 we used the macro PROCESS (model 4, simple mediational model) for SPSS, which was created by Hayes (2013) to estimate *indirect effects* on mediational models through the bootstrapping method (Hayes, 2009). The hypothesised mediational model included the following variables: presence or absence of information about the nationality of criminals (independent variable, coded as dummy variable, being 1=the news story mentions that criminals are immigrants, 0=the news story does not mention the criminals' nationality); attitude towards immigration (mediating variable); and degree of agreement with the negative and stereotypical belief "immigration contributes to the increase in crime and public insecurity" (dependent variable). The proposed mediational model was computed separately for the participants with high and low involvement.

Figure 3. Mediation analyses (low involvement, n = 119, study 1): attitude towards immigration as mediating variable in the relation between the reference to the nationality of the protagonists of the news story and the negative stereotypical beliefs on immigration



Group cue → Attitude towards immigration → Immigration contributes to the increase in crime

$$B_{\text{indirect effect}} = .44, SE = .19, 95\% CI [.18, .74]$$

Note. The previous figure shows the non-standardised regression coefficients, B . The coefficient of the *direct effect* is shown in parentheses. * $p < .05$, ** $p < .01$, *** $p < .001$.

The mediational analysis applied between the *low involvement* participants revealed that attitudes towards immigration mediated the relation between the presence of information about the nationality of the protagonists of the news story and a greater agreement with the negative stereotypical belief "immigration contributes to the increase in crime and public insecurity", since the indirect effect (calculated by using 10,000 bootstrap samples) was statistically significant ($B_{\text{indirect effect}} = .44, SE = .14, 95\% CI [.18, .74]$)^[6]. Thus, the mentioning that the criminals were immigrants induced a more negative attitude towards immigration ($B = -1.62, p < .001$) and this, in turn, was associated with a greater agreement with the idea that "immigration contributes to the increase in crime and public insecurity" ($B = -.27, p < .001$) (see Figure 3). However, the mediational analysis among *high involvement* participants revealed that attitudes towards immigration do not mediate the relation between the presence of information about the nationality of the protagonists of the news story and greater agreement with the negative stereotypical belief "immigration contributes to the increase in crime and public insecurity", since the indirect effect was not statistically significant ($B_{\text{indirect effect}} = .03, SE = .09, 95\% CI [-.15, .22]$). Thus, hypothesis 4 did receive empirical support.

2.3. Conclusions

The results of study 1 corroborated three of the four hypotheses. It corroborated that the presence of information about the nationality of the criminals had a significant effect on the negative attitudes and emotions towards immigrants specifically when the involvement with the topic of the news story

was low. The results also corroborated that the process or mechanism of influence of the reference to the nationality of the criminals in the activation of stereotypical beliefs was mediated by attitudes towards immigration, but only among participants with low involvement. However, this does not mean that people with high involvement are not susceptible to this type of peripheral information. As hypothesised, in this case the process of influence is very likely to be related to cognitive mediation, i.e., due to the activation of trains of thought. This hypothesis was confirmed in the second study.

3. Study 2

Study 1 presented an important limitation: there were no differences in the interest nor in the emotional impact of the story among people exposed to a news story that alluded to an incident occurred in his own city (Valladolid, high involvement) in comparison to people who read a news story that chronicled the same event but located in another far city (Barcelona, low involvement). A second limitation is that it did not collect information about reactions to the news story (cognitive responses), since only self-report methods were employed. Therefore, a second experiment was designed in order to address the aforementioned problems. The main objective of the second study was to test a mediational model that included the cognitive responses raised by the reading of the news story as mediating variables.

3.1. Method

Study 2 consisted of an experimental research which involved 276 students from the University of Salamanca. The average age of participants was 19 years (DT = 2.49; 17-46 years) and 56.2% of them were women.

As in study 1, this study used a 2 x 2 between-subjects design, based on two experimental manipulations of a news story (group cue and involvement). We used the same news story used in study 1 (only 4.7% of the participants stated that they had already read the news story before), with the necessary modifications. Two conditions were created for the manipulation of *involvement with the subject of the news story*: low (the criminal event takes place in Oviedo) or high (the criminal event takes place in Salamanca, the city of the participants). The dependent variables were evaluated using a split-ballot questionnaire. The experiments took place in several classrooms of the University of Salamanca. In each classroom, participants were randomized to the four experimental groups. After the experimental news story was read, participants had to answer the questionnaire including the dependent, manipulation-check, and control variables:

Cognitive responses. These were evaluated with the "thought-listing technique" (Igartua and Cheng, 2009; Valkenburg, Semetko and de Vreese, 1999). Participants were asked: "write all thoughts, ideas or reflexions you had while reading the news story, i.e. those ideas that came to your mind during the reading of the news story". Four people^[7] with training in content analysis conducted the coding process. The first part of the analysis focused on counting the total number of cognitive response and the total number of words written by each respondent. Then, the following criteria were evaluated taking the ideas written down as units of analysis: a) Do they make any reference to the nationality of the criminals, with expressions such as foreign or immigrant (or similar), or do they make a comment about immigration and foreigners in general? (1 = yes, 0 = no); b) Do they show empathy, sympathy, pity, or identification with the victims of the criminal act? (1 = yes, 0 = no); c) Do they manifest a reaction of indignation, contempt, anger, rage or disgust for the situation reported in the news story, or towards the criminals? (1 = yes, 0 = no); d) Do they demand punitive measures (such as more

severe prison sentences) or police measures (more surveillance or police effectiveness) to deal with the type of events narrated in the news story? (1 = yes, 0 = no); e) Do they allude to the lack of public security, or the feeling of insecurity or fear in society? (1 = yes, 0 = no); f) Do they use insults or negative expressions such as "inhuman nature", "in cold blood", "brutality", "harshness", "cowardice", "evil", "cruelty", "shameless", or other terms that allude to the character or personality of the criminals of the news story? (1 = yes, 0 = no); g) Do they make a direct connection between immigration and crime or insecurity? For example, when we say that immigrants are criminals or that with the increase of immigration there are more crimes or insecurity? (1 = yes, 0 = no).

To assess the reliability of the encoding, 46 questionnaires were randomly chosen (16.66% of the sample, 137 cognitive responses) and independently examined by two analysts based on the previous criteria. Reliability was calculated with Krippendorff's coefficient Alpha (using KALPHA macro for SPSS; Hayes and Krippendorff, 2007). The results of the reliability are: number of written cognitive responses ($\alpha_k = .95$), number of written words ($\alpha_k = .99$), reference to the nationality of criminals ($\alpha_k = 1.0$), expressions of empathy ($\alpha_k = .82$), expressions of revulsion ($\alpha_k = .65$), demands for punitive or police measures ($\alpha_k = .83$), alluding to the lack of security ($\alpha_k = .58$), references to the character or personality of criminals ($\alpha_k = .54$) and allusions to the existence of a relation between immigration and insecurity ($\alpha_k = .82$). The mean of the written cognitive responses was 3.41 ideas per person ($DT = 1.46$) and the mean of written words was 41.64 words per person ($DT = 27.30$). An aggregated data file was created with the information from the encoding of cognitive responses (taking as aggregation variable the number of questionnaire), so that the final database (which also contained information about the rest of the variables) indicated the number and percentage of cognitive responses that focused on each of the aspects identified for each participant.

Emotions felt during the reading of the news story. Participants had to indicate the extent to what (from 1 "nothing" to 5 "a lot") reading of the news story had made them feel the ten different emotions (see study 1).

Evaluation of the news story. We used a semantic differential comprised of 9 bipolar 7-point scales with antonyms in their extremes: "clear-confuse", "easy to reading-difficult to read", etc. (see study 1).

Interest aroused by the news story. Participants were asked to "assesses the degree of interest aroused by the news story" (from 0 "no interest" to 10 "great interest").

Beliefs about the consequences of immigration. Participants were asked to indicate their degree of agreement or disagreement towards 8 claims about the consequences of immigration in Spain (see items in study 1). Principal components factor analysis (varimax rotation) extracted two factors (61.81% of the variance). The first factor referred to the belief that "immigration is a necessary contribution to the country" ($\alpha = .73$); while the second factor referred to the belief that "immigration contributes to the increase in crime and public insecurity" ($\alpha = .86$).

Political self-positioning. Participants were asked to answer to the following question: "in political issues the expressions left and right are normally used. What number of the following scale would represent best your political position? (from 1 left to 10 right)"; $M = 5.23$, $DT = 2.38$).

Media consumption. Participants were asked to answer to the following four questions: How many hours do you watch TV in a normal weekday? Do you listen to the radio? Do you read the general information press? Do you surf the Internet? A "general media consumption" indicator was created from the simple sum of the four considered variables ($M = 396.96$ minutes a day, $DT = 280.01$).

News consumption. Participants were asked to answer to the following four question: "to what extent (from 1 "nothing" to 5 "a lot") do you usually follow the news through the following media?" (Radio, television, print media and Internet). An indicator of "news media consumption" was created from the simple sum of the four considered variables ($M=12.44$, $DT=2.40$).

Interest in the subject of immigration. Participants were asked to answer to the following question: To what extent are you interested in the subject of immigration? (from 1 "nothing" to 5 "a lot"; $M=3.60$, $DT=0.75$).

Participation in discussions on the subject of immigration. Participants were asked to answer to the following four question: Have you ever actively participated, by giving your opinion, in conversations or discussions on the subject of immigration? (from 1 'never' to 5 "many times"; $M=2.94$, $DT=1.14$).

Level of contact with immigrants. Participants were asked whether they have or had had maintained (1=yes, 0=no) some kind of family, friendship, work, school or neighbourhood relation with immigrants. An index of personal contact with immigrants was created from the simple sum of the five dichotomous variables ($M=2.32$, $DT=1.25$).

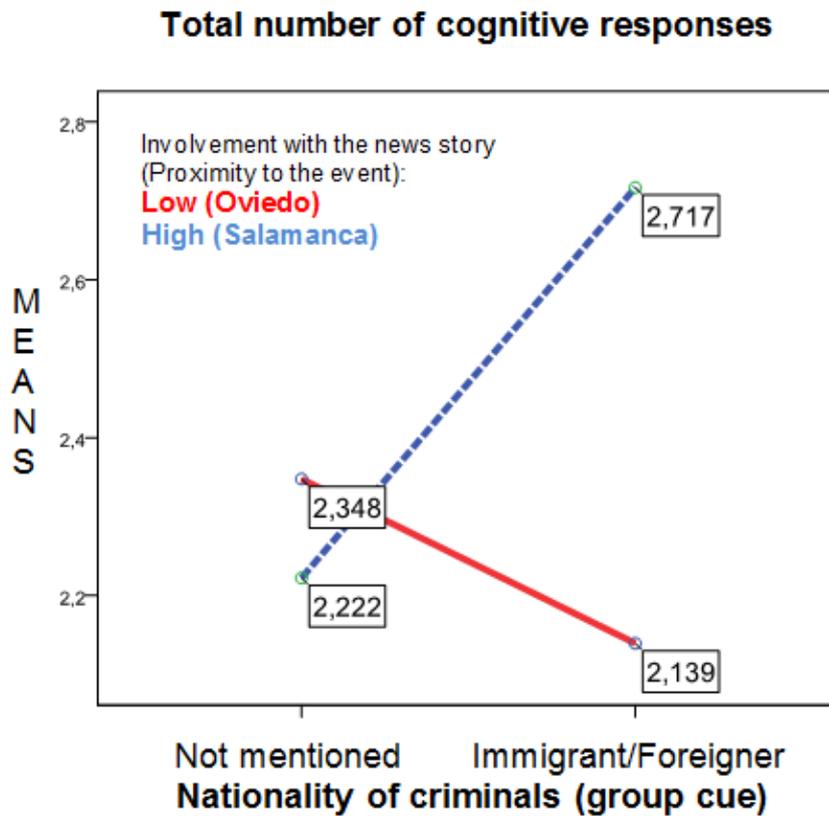
Experience with crime. Participants were asked to answer to the following questions: "Have you ever, in the course of your life, been the victim of a robbery in which there was no physical assault?" (1=yes, 0=no; 36.2% were affirmative answers) and "Have you ever been the victim of a robbery involving physical violence?" (1=yes, 0=no; 4.0% were affirmative answers). An index of personal experience with crime was created from the sum of the values of these variables ($M=0.39$, $DT=0.52$).

3.2. Results

First, we carried out a one-way factor analysis of variance (ANOVA) that included the experimental *condition* (made up of four groups) as the independent variable and the nine indicators of the evaluation of the news story as the dependent variables. The results showed that there were no statistically significant differences between the four versions of the experimental news story in any of the evaluation variables of the news story (in all analyses $p > .296$). These results indicate that the four experimental versions of the news story, despite containing two types of manipulation, did not generate differences in terms of their general assessment and therefore behaved as homogeneous stimuli. No significant differences were neither observed between the four experimental groups according to sex, age, interest in the subject of immigration, participation in conversations about the issue of immigration, level of contact with immigrants, experience with crime, media consumption and news consumption (in all analyses $p > .330$). Therefore, it can be concluded that the procedure of randomisation of participants to the conditions was successful and led to the formation of four homogeneous groups in relevant variables.

In the indicator of interest aroused by the news story, there were no statistically significant differences between the participants who read the news story located in Salamanca ($M=6.73$, $DT=1.85$) and those who read the news story located in Oviedo ($M=6.55$, $DT=1.90$) ($t(274) = -0.81$, $p = .419$). With regards to the emotional impact of the news story, there was only one statistically significant difference with respect to the emotion of surprise ($t(270) = -2.66$, $p < .008$). Participants who read the news story located in Salamanca ($M=2.66$, $DT=1.05$) showed greater surprise than participants who read the same news but located in Oviedo ($M=2.33$, $DT=0.98$). Based on these findings, it can be concluded that the manipulation of involvement with the news story did not produce the expected effect in terms of interest and emotions, which suggests that the procedure used to manipulate the involvement with the news story is not entirely appropriate.

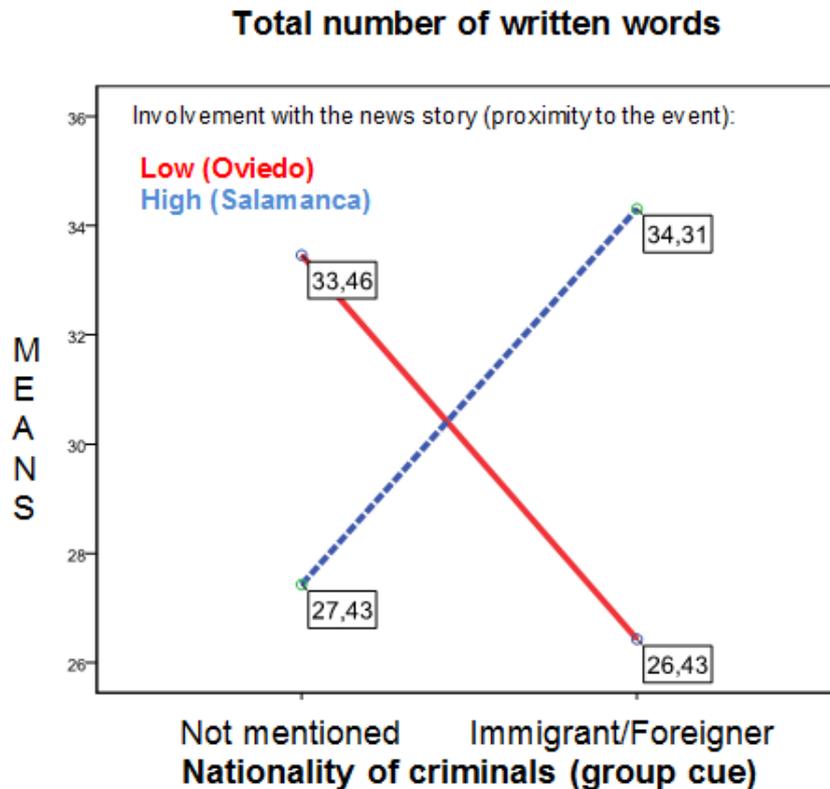
Figure 4. Effect of the reference to the nationality of criminals and effect of the involvement with the subject of the news story on the total number of written CR



In order to test hypothesis 5 we carried out nine analyses of covariance (ANCOVA) for a 2 x 2 between-subjects factor design, including as covariates such variables as sex, age, political self-positioning, interest in the subject of immigration, in conversations about the issue of immigration, level of contact with immigrants, experience with crime, media consumption and news consumption. With the inclusion of covariates we obtained information about the impact of the independent variables, controlling for the influence of other relevant variables, which increases the statistical power of the analysis (Hayes, 2005). The dependent variables considered were the different indicators created from the cognitive responses (CR; see *methods*).

We obtained a marginally significant interaction effect in the "total number of CR" ($F(1, 189) = 2.94, p < .088, \eta_p^2 = .015$). There were no differences between participants with high and low involvement when the nationality of the criminals was not mentioned. On the other hand, among the students who read the news story mentioning that criminals were immigrants there were clear differences depending on their involvement: participants with high involvement wrote more cognitive responses (see Figure 4). A similar result was obtained with respect to the "total number of written words" by participants (Figure 5). In this case, the marginally significant interaction effect ($F(1, 189) = 3.40, p < .067, \eta_p^2 = .018$) showed that participants with high and low involvement reacted very differently depending on whether the nationality of the criminals was included or not in the news story.

Figure 5. Effect of the reference to the nationality of criminals and effect of the involvement with the subject of the news story on the total number of written words



In the variable "percentage of CR which allude to the nationality of the criminals", there was a significant interaction effect between the two independent variables ($F(1, 160)=4.02, p<.042, \eta_p^2=.026$), being people with high involvement, in comparison to the people with low involvement, the most affected by the news story that mentioned the nationality of the criminals (Figure 6). Similarly, there was a statistically significant interaction effect in the comments written by participants that linked immigration with the increase in insecurity ($F(1, 160)=7.07, p<.009, \eta_p^2=.042$): face with a news story mentioning the nationality of the criminals, it was people with high involvement who wrote more cognitive responses that associated immigration with public insecurity (Figure 7).

Figure 6. Effect of the reference to the nationality of criminals and effect of the involvement with the subject of the news story on the percentage of CR alluding to the nationality of criminals

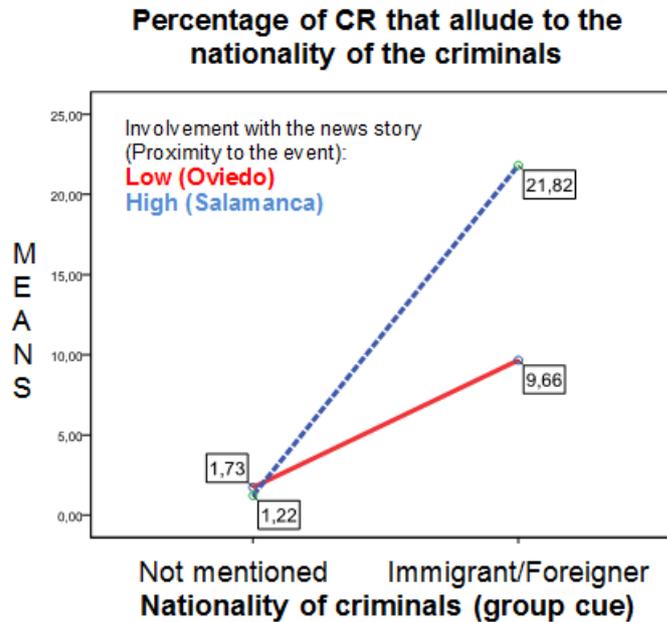
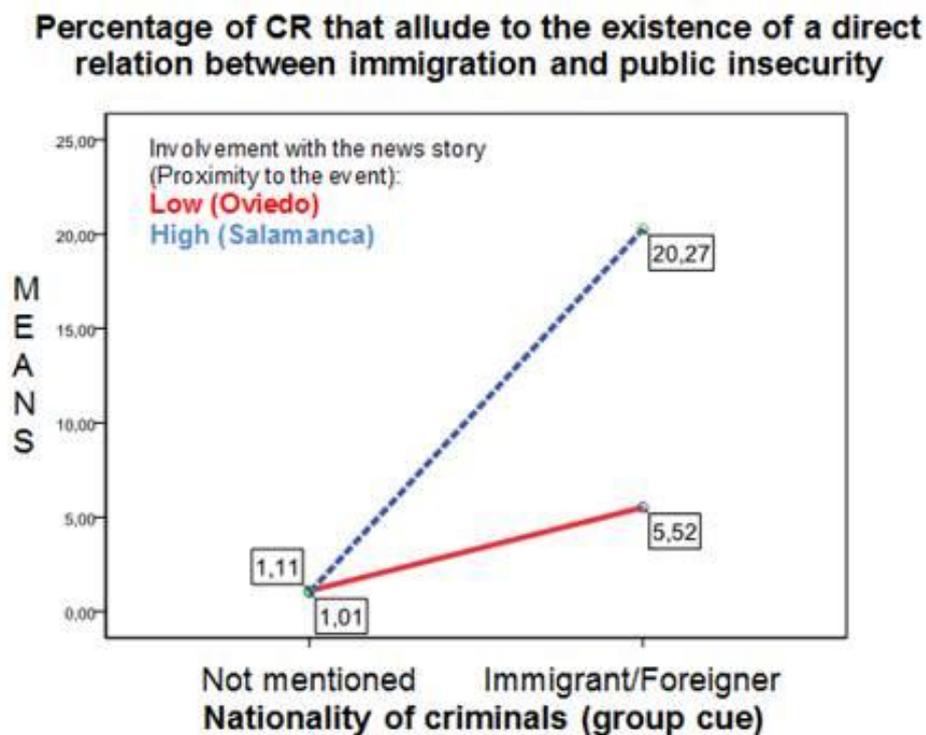
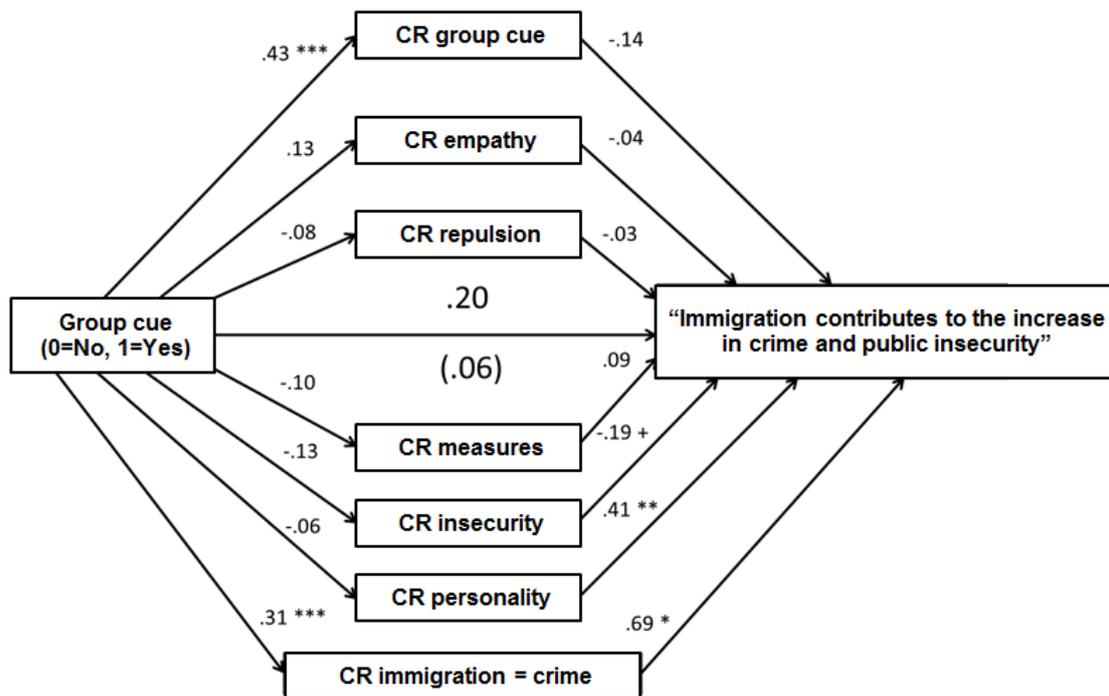


Figure 7. Effect of the reference to the nationality of criminals and effect of the involvement with the subject of the news story on the percentage of CR with allusions to the existence of a relationship between immigration and insecurity



To test hypothesis 6 we used the macro PROCESS for SPSS (model 4) created by Hayes (2013), which tested a mediational model with multiple mediating variables (Preacher and Hayes, 2008), since the seven indicators of cognitive responses obtained from the thought-listing technique (all except the number of CR and the number of written words) were introduced as such variables, being the independent variable the inclusion or not of the reference to the criminals’ nationality (independent variable, encoded as dummy variable, being 1=the news story mentions the criminals are immigrants, 0=the news story does not mention the criminals’ nationality), and the dependent variable the degree of agreement with the negative and stereotypical belief that "immigration contributes to the increase in crime and public insecurity". The mediational model was computed separately for the participants with high and low involvement (calculated with 10,000 bootstrap samples), and expected cognitive variables to only have a significant mediating effect on participants with high involvement.

Figure 8. Mediational analysis (high involvement, n = 116, study 2): cognitive responses raised by the reading of the news story as mediating variables in the relation between the reference to the nationality of the criminals of the news story and the negative stereotypical beliefs about immigration



Group cue -> CR about immigration = crime -> Immigration contributes to the increase in crime

$B_{indirect\ effect} = .21, SE = .11, 95\% CI [.02, .47]$

Note. The previous figure shows the non-standardised regression coefficients, *B*. The coefficient of the *direct effect* is shown in parentheses. + $p < .10$, * $p < .05$, ** $p < .01$, *** $p < .001$

The mediational analysis applied to the *low involvement* participants revealed that none of the seven variables related to the cognitive impact of the news story acted as a mediating variable and,

therefore, that there were no statistically significant indirect effects. On the other hand, the mediational analysis applied to participants with *high involvement* revealed a statistically significant indirect effect through the mediating variable "CR on the existence of a relationship between immigration and the increase in public insecurity" ($B_{indirect\ effect} = .21, SE = .11, 95\% CI [.02, .47]$; Figure 8). Thus, the inclusion of the nationality of criminals in the news story induced a large number of cognitive answers alluding to the relationship between immigration and insecurity ($B = .31, p < .001$), which was associated in turn with a greater agreement with the stereotypical belief that "immigration contributes to the increase in crime and public insecurity" ($B = .69, p < .042$).

3.3. Conclusions

The results obtained in the second study constitute a substantial support to the hypotheses formulated. Consistent with hypothesis 5, involvement with the news story increased participants' cognitive production (the degree of reflection and the number of written words) especially when it mentioned that the criminals were immigrants. In addition, in the case of the news story mentioning the nationality of the criminals, it was people with high involvement who largely wrote cognitive responses that linked immigration and insecurity. The results of the mediational model are also consistent with hypothesis 6. They confirmed that the cognitive responses (in particular, the cognitive responses alluding to a relationship between immigration and public insecurity) explained the effect of the reference to the nationality of the criminals in the activation of the stereotypes about immigrants, but only when the involvement with the topic of the news story was high.

4. Conclusions and general discussion

The main objective of the two experimental studies was to identify the mechanisms or processes that explain the socio-cognitive impact caused by the news story's dominant framing of immigration (which links immigration with crime and the increase in insecurity). Both studies were designed based on the findings of framing effects research, the cognitive processing of persuasive communications and the role of the (textual or visual) cues on the race or nationality of the protagonists of the news story in the activation of stereotypes (e.g., Brader et al., 2008; Igartua and Cheng, 2009; Igartua, Moral and Fernández, 2011; Peffley, Shields and Williams, 2001).

Using a news story about a criminal and very violent act, in which the information on the nationality of the criminals (group cue) and the place where the event took place (involvement) were manipulated, we confirmed that participants showed a more negative attitude towards immigration and experienced more negative emotions towards immigrants when they read the news story that labelled criminals as immigrants and had a low involvement, which confirmed hypotheses 1 and 3. However, this same effect of interaction did not take place in relation to the impact on the negative stereotypical beliefs ("immigration contributes to the increase in crime and public insecurity"), so hypothesis 2 did not receive empirical support. However, there was an indirect effect in these beliefs, since participants with low involvement showed a greater degree of agreement with the stereotypical beliefs when the news story mentioned the immigrant status of the criminals and this effect was mediated by attitudes towards immigration. Therefore, mentioning the nationality of the criminals had an indirect effect on the activation of the stereotypes but only when the news story had aroused little interest (low involvement) among participants, which corroborated hypothesis 4.

In study 2 we collected and analysed the cognitive responses produced by the reading of the news story through the "thought-listing technique". The results indicate that participants with high and low involvement reacted very differently depending on whether the nationality of the criminals was

mentioned or not. Thus, involvement with the subject of the news story increased the cognitive production of participants but only when the news story mentioned that the criminals were immigrants. In addition, there was cognitive channelling and more critical cognitive responses towards immigration among the participants with high involvement with the news story that defined the criminals as immigrants or foreigners, which confirmed hypothesis 5. Hypothesis 6 was also corroborated since the critical or negative cognitive responses that alluded to the existence of a relationship between immigration and public insecurity explained the effect of the reference to the nationality of the criminals on the activation of stereotypes about immigrants, but only when the involvement with the subject of the news story was high.

The results are convergent with the theoretical proposal and with a *dual model for news framing effects*. It was confirmed that the peripheral cues included in a news story (e.g. a news story about a criminal act mentioning that the criminals are immigrants or foreigners, *group cue*) had significant socio-cognitive effects on the cognitive responses, attitudes and beliefs and emotions experienced by the reader. However, the mechanism that explains these effects is different depending on the level of readers' involvement with the narrated event. When the event occurs outside the context of the reader (low involvement) the influence of the peripheral cues occurs because the group cue included in the news story activates a kind of mental shortcut, an quick judgement of the object that has been highlighted in the news story (in this case, the fact that the criminals of the story are immigrants or foreigners), which produces a process of *attitudinal modelling*. In other words, the peripheral cue activates a certain attitude and this in turn influences the activation, formation or reinforcement of a certain belief or opinion. This mechanism is not triggered among people with high involvement with the subject of the news story, which does not mean that they are not affected by the peripheral cues. Thus, when people read a news story about an event that has taken place in their own local context (high involvement), the peripheral cues influence the processes of reflection and activate a type of *biased cognitive processing*, which leads to a process of *cognitive channelling*: the cognitive answers written by readers have the same tone of the information that appears in the news story, which will in turn determine its impact on opinions or beliefs.

This theoretical proposal on the news framing effects mechanisms has been tested in a specific context: the treatment of immigration in the media. In order to verify its validity in a more general context, future research should focus on other issues. In addition, future research should take into consideration the effect of other peripheral cues in the construction of the news framing, beyond the reference to the nationality of the protagonists of the story. On the other hand, new research studies should be carried out to examine the long-term effects in conditions of high and low involvement since, according to the Elaboration Likelihood Model, the attitudes formed or changed through the central route show greater temporal persistence, greater behaviour prediction power and greater resistance to counterarguments than the attitudes formed or changed through the peripheral route (Petty and Cacioppo, 1986). Although these predictions have been proven in the field of persuasion there is no empirical evidence to date about whether these processes also operate in relation to news framing effects.

The two experimental studies had satisfactory levels of quality (randomisation of participants to the treatments, homogeneous stimuli, adequate internal consistency of the scales), but they also had a series of limitations that should be acknowledged. First, the procedure to manipulate the involvement did not work properly. Anyways, the peripheral *group cue* did exercise a significant indirect effect in the activation of the stereotypical and negative beliefs about immigration through the mediation of attitudes (low involvement) and cognitive responses (high involvement). A second limitation is that both studies involved college students, i.e. a very homogeneous group in terms of their attitudes

towards immigrants. It would be advisable to replicate this type of research with the general population. Thirdly, another possible limitation refers to the type of dependent variables used (the self-administered scales and the “thought-listing technique” task). Relevant effects could have been more easily found through the use of implicit measures of attitudes (Briñol, Petty and McCaslin, 2009; Dovidio, Kawakami, Smoak and Gaertner, 2009).

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6. Notes

[1] See "Recomendaciones del CAC sobre el tratamiento informativo de la inmigración" ("Recommendations of the Audiovisual Council of Catalonia on the news treatment of immigration") http://www.cac.cat/pfw_files/cma/recerca/quaderns_cac/Q12recomanacions_ES.pdf

[2] Media effects research is increasingly more focused on the analysis of the mediating processes and mechanisms. The works of Baron and Kenny (1986) and, most recently, Hayes (2009) have given researchers methodological tools to contrast the mediational processes and to gain deeper and more advanced insights into the causal evidence of the media effects (Hayes, 2013). Research on framing effects has been influenced by this strand of mediational analyses. In this context, the objective is not only to determine whether a particular news approach or frame influences the cognitive, attitudinal and emotional processes, but also to explain the responsible mechanism, i.e. to determine why a certain influence occurs depending on how a news story is built.

[3] The field work was carried out with the collaboration of José Antonio Otero, Professor of the University of Salamanca and member of its Observatory of Audiovisual Content.

[4] The online version of the news story is available at: http://elpais.com/diario/2006/06/18/espana/1150581613_850215.html.

[5] The new "condition" variable (made up of four groups) was created from the combination of the levels of the two independent variables.

[6] According to the bootstrapping method, an indirect effect is statistically significant if the established confidence interval (CI at 95%) does not include the zero value. If the zero value is

included in said confidence interval, the null hypothesis that proposes that the indirect effect equals 0, i.e. that there is no association between the involved variables, cannot be rejected (Hayes, 2013).

[7] The coders were: Elena Palacios, Salvador Alvidrez, Socorro Palitó and Tania Acosta.

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