Exploring the Impact of Narrative Framing on Intergroup Attitudes and Prosocial Behavior through Immigrants' Testimonial Narratives

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Abstract

Despite its ubiquity in human life, narrative exposure has only recently begun to receive more theoretical and empirical attention seeking to explain *what* and *how* they produce different psychological outcomes. These attempts highlight how, for instance, narrative transportation or identification-related processes, can explain attitudinal and behavioral changes. However, there is still a lack of systematic and simultaneous tests of the mediators at play. Here, we focus on testimonial narrative messages and test a complex model in a pre-registered online experiment (Spain; $N = 1502$) and then replicated it in a different socio-cultural context (Hungary; $N = 960$). In each study, native participants read one of 12 possible testimonials about the work life of an immigrant, which were manipulated in terms of testimony's narrative frame (immigrant as a Profiteer vs Victim vs Hero), origin of the immigrant (higher vs lower stigma), and narrative voice used (1st vs 3rd person). Then, we measured participants' attitudes and helping intentions towards immigrants, along with a series of mechanisms that evaluates participants' psychological experience with the testimony. Mediational analyses carried out in both cultural contexts revealed ripple effects of the narrative frames via, mainly, a stronger identification with the protagonist of the story, as well as subsequent increases in meaningful affect and cognitive elaboration, and decreased counterarguing. These effects are discussed concerning their implications for models of narrative persuasion and the relevance of testimonial messages to address social issues.

Keywords: Narrative Persuasion, Testimonial Narratives, Immigration, Intergroup Relations, Frame, Narrative Voice.

A characteristic feature of human life is our capacity to create, distribute and immerse ourselves in narrative messages – hence the expression *Homo Narrans* (Fisher, 1985). Narratives are ubiquitous in every culture (e.g., oral tradition, mass media, novels, video games, etc.) and, apart from an entertainment function, they possess immense relevance for the transmission of cultural information, the development of psychological skills (e.g., Mar et al., 2009) and to shape intergroup relations (e.g., Park, 2012).

For example, narratives allow the development and enhancement of critical social skills such as Theory of Mind (Guajardo & Watson, 2002), critical to explain others' behaviors and act accordingly (see Apperly & Butterfill, 2009; Baron-Cohen, 1991). Additionally, they entail significant implications to intergroup relations. Following the principles of intergroup contact –i.e., the promotion of positive interactions among member of different groups to improve their relations (see Pettigrew & Tropp, 2006)– reading narratives that portray the stories of stigmatized outgroup members (e.g., immigrants or refugees) has been proved to improve social relations (e.g., Igartua & Cachón-Ramón, 2023; Wojcieszak et al., 2020). Narratives thus can be seen as tools with important consequences for social change.

Drawing from theories on the effects of narrative messages (i.e., narrative persuasion), and the effects of mediated interactions with outgroup members (i.e., mediated intergroup contact, Park, 2012), we evaluate how testimonial messages can affect individuals' cognitions and emotions, as well as intergroup attitudes and behavioral intentions.

Narrative Persuasion

Currently, there is a growing research interest in the field of narrative persuasion (Busselle & Bilandzic, 2012; Green et al., 2019; Green & Brock, 2000). This field of study analyzes how exposure to information presented through narrative messages can persuade the receptor and impacts their beliefs, attitudes, behavioral intention, and behaviors (see Braddock & Dillard, 2016; Green et al., 2019; Hoeken et al., 2016). As a consequence, information in narrative format is beginning to be employed as a persuasive tool in, for example, health improvement (Green, 2006; Kim et al., 2020; Watts et al., 2023) and prejudice reduction (Banas et al., 2020; Igartua et al., 2023; Igartua & Guerrero-

Martín, 2022; Zhuang & Guidry, 2022), as well as in the transmission of scientific knowledge (Dahlstrom, 2014). What is more, deliberate narratives aimed at, for instance, improving intergroup attitudes (e.g., telling the story of a refugee) can be conceptualized as a form intergroup contact (see Park, 2012).

Testimonial Narratives: A Transformative Experience

In the present work, we center on a subtype of narrative messages due to their characteristics and advantages over other formats. These narrative formats imply the presentation of two different states that correspond to the before and after of an event experienced by a protagonist, and the connection of these states through a temporal and causal sequence (Igartua & Cachón-Ramón, 2023; Igartua & Guerrero-Martín, 2022) or narrative arc (Watts et al., 2023). Among their advantages, testimonials are less sophisticated narratives and focus only on one person, thus implying a better understanding, as well as being more effective when involvement in the subject matter is lower (Braverman, 2008; de Wit et al., 2008). On the other hand, they can be presented very briefly, so their production and dissemination costs (e.g., online content, social networks) are usually lower.

Recent studies show that testimonial narrative messages can improve attitudes towards stigmatized immigrants (Igartua & Cachón-Ramón, 2023; Igartua & Guerrero-Martín, 2022) and refugees (Paravati et al., 2022), and also increase support towards that collective (Or et al., 2023), and the construction of common identities in a religious context (Faimau, 2017). Consequently, it is possible to consider testimonials messages –both for their characteristics and their persuasive effects– as *narrative pills* that effectively produce positive changes in people's attitudes and behaviors (Zhuang & Guidry, 2022).

Taking into consideration the efficacy and effectiveness of testimonial messages, it is of paramount importance to study whether different "narrative devices" (e.g., narrative frames) influence their persuasive power (Tukachinsky, 2014). Additionally, these devices can initiate a cascade of psychological effects where one or several (parallel) mechanisms could further contribute to increase their persuasive power. Therefore, it is necessary to understand not only *what* the potential effects of testimonial narratives are (e.g., Braddock & Dillard, 2016), but also *how* and *when* (i.e., their boundary conditions) they operate and produce these effects (Green, 2021).

Narrative Testimonial Devices: Frame, Group Cue and Narrative Voice

While the topic or theme of the testimonies can range quite dramatically (e.g., de Wit et al., 2008; Schemer & Meltzer, 2020), testimonies can be frame differentially depending on (for instance) the words emphasized, or the focus the narrative is leading to. According to Entman (1993), framing is the deliberate selection of one or more aspects of a text to make them more noticeable, memorable or even meaningful.

From a social psychological perspective, studies that frame testimonies within the topic of immigration (e.g., reading a testimony about an immigrant or refugee) can be considered an application of mediated forms of intergroup contact[1]. Taking into consideration the extended contact hypothesis, awareness or observation of contact could be enough to promote better attitudes toward members of the outgroup (see Park, 2012). In this line, past research has shown that immigration-related testimonials have the potential to improve attitudes and stereotypes towards members of an outgroup (Wojcieszak et al., 2020).

On the other hand, the content itself can be presented in different ways,

manipulating the information about the protagonist (e.g., cultural background) or the way the testimony is being told (e.g., narrative voice). For instance, there is abundant evidence showing the greater persuasive effectiveness in using the 1st person point of view (e.g., Chen & Bell, 2022; Zhuang & Guidry, 2022) and there is also supporting literature showing how the group cue of the protagonist's (e.g., country of origin) can influence persuasion (Igartua & Cheng, 2009). Importantly, however, to date no study has examined the interactive joint effect of these three factors on individuals' attitudes.

Mechanisms Involved: Identification, Emotional Reactions and Cognitive Processes

A variety of psychological mechanisms is behind narratives' persuasion effectiveness. There are those related to identification, and emotional and cognitive processes. In fact, different models and theories highlight their role in an interactive process of information processing. For instance, Green and Brocks' (2002) transportation-imagery model puts the emphasis on how a story can produce a convergent mental process called narrative transportation, which integrates mental imagery (i.e., the creation of vivid images), emotional reactions, and a sense of detachment to real-word information (Green & Brock, 2000; see also Van Laer et al., 2014). This transportation, or absorption in Slater and Rouner's (2002) terms, is further mediated by the identification with relevant characters. This identification involves a merging process with the narrative protagonist, and by itself can help increasing the persuasiveness of testimonies (Cohen, 2001; Igartua et al., 2017).

Besides identification, narrative messages (and testimonies in particular) most undoubtedly produce emotional reactions among recipients, emotions that in turn, can affect how we process information and how we are persuaded. It has been

shown that particular positive emotions such as *awe* (Griskevicius et al., 2010), or negative emotions such as *sadness* (Yoo et al., 2014), can have distinctive effects in persuasion. Among positive emotions, inspiring media can lead to meaningful affect (e.g., *moral elevation*) and promote moral intentions that can lead to prosocial behaviors (Oliver et al., 2012). Together with a sense of identification with the protagonist, emotional reactions have also been proposed as serial mediators of the effects of narratives on attitudes and beliefs (Nabi & Green, 2015; Watts et al., 2023).

Finally, a third group of psychological mechanisms linked to narrative persuasion is of cognitive nature. For instance, reading different testimonial narratives involves cognitive deployment and investment (i.e., cognitive elaboration, which is the process of reflecting on the topic of the message while it is being processed). Further, and depending on the message itself, reading testimonial narratives can initiate a parallel process of counterarguing. In particular, people are expected to produce critical responses to the message for its rebuttal. This form, cognitive elaboration and counterarguing can either increase or decrease (respectively) persuasion (Green, 2006; Moyer-Gusé & Nabi, 2010; Slater & Rouner, 2002).

The above cognitive mechanisms seem to be dependent on additional psychological reactions, such as the identification with the characters of the narratives. As Igartua (2010) shows, identifying oneself with the characters implies absorption or transportation in the story as well as a lowered sense of counterarguing and, additionally, heightened cognitive elaboration. While there is increasing interest in studying the mechanisms that explain the effectiveness of testimonials, research that evaluates the impact of different mediators simultaneously is scarce (Oschatz & Marker, 2020). Moreover, the study of narrative persuasion continues to be marked

by the evaluation of its effectiveness, and thus, even the systematic review of mechanisms, has been eliminated in some meta-analyses (e.g., Shen et al., 2015).

Objective and Hypotheses

Our study, which was preregistered, tests a large-scale model of the persuasive effects of immigration-related testimonies on readers' attitudes and behavioral intentions in Spain (Experiment 1) and Hungary (Experiment 2)[2]. The study also provides a comprehensive examination of the different mechanisms involved in the proposed effects. We focus on the topic of work-related immigration and test the effects of three frames concerning the protagonist's reality: *profiteer* of welfare, *victim* of exploitation, and *hero*, overcoming circumstances. Additionally, we evaluate how the narrative voice (i.e., 1st vs 3rd person) and the group cue of the protagonist (i.e., from Morocco or Ecuador in Experiment 1, and from Syria or Ukraine, in Experiment 2) moderate the relationship effects of the frames on the identification with the protagonist (first) and the subsequent emotional and cognitive responses (subsequently). To the best of our knowledge, this is the first and most comprehensive examination of narrative testimonial devices and the conditional mechanisms they (de)activate.

Our predictions, as stated in the pre-registration, are as follows: The narrative frames portraying an immigrant as a victim and a hero (compared to a profiteer) will produce a greater levels of identification with the protagonist of the testimony (Igartua & Cheng, 2009) (Hypotheses H1.1 and H1.2), and more positive attitudes and helping intentions towards immigrants (H2.1 and H 2.2).

In addition, we expect conditional indirect effects of the narrative frames. In the full model (see Figure 1), we expect that the group cue and narrative voice condition the effects of the frames on identification with the protagonist. Additionally, we

expect that the effects of the frames on dependent variables (i.e., attitudes and helping intentions) will be mediated by identification with the protagonist (first), the meaningful affect, the cognitive elaboration and counterarguing (subsequently).

Concerning the indirect effects, we expect identification with the protagonist (i.e., higher in the victim and hero conditions; H3.1) will mediate the effects of the frames on the attitudes and help intentions towards immigrants. Subsequently, we expect that increased identification will increase meaningful affect (H3.2) and cognitive elaboration (H3.3), while decreasing counterarguing (H3.4) (see Nabi & Green, 2015; Paravati et al., 2022; see also Igartua & Cachón-Ramón, 2023; Igartua & Guerrero-Martín, 2022).

Finally, we hypothesize that the effects described above will be conditioned by the effects of two moderators (i.e., group cue and narrative voice), as found in previous research (Chen & Bell, 2022; Igartua & Guerrero-Martín, 2022). In particular, we expect that, compared with the profiteer framing condition, the victim and hero frames will increase the identification with the protagonist more strongly when the story is being told in the 1st person (compared to the 3rd) and when it depicts a less stigmatized immigrant (compared to a higher level of associated stigma). Therefore, we propose a three-way interaction between the frames, the narrative voice, and the group cue (see Igartua et al., 2019), which will affect the subsequent serial mediation and effects on the dependent variables (H4).

Figure 1

Complete model of conditional indirect effects of narrative frames
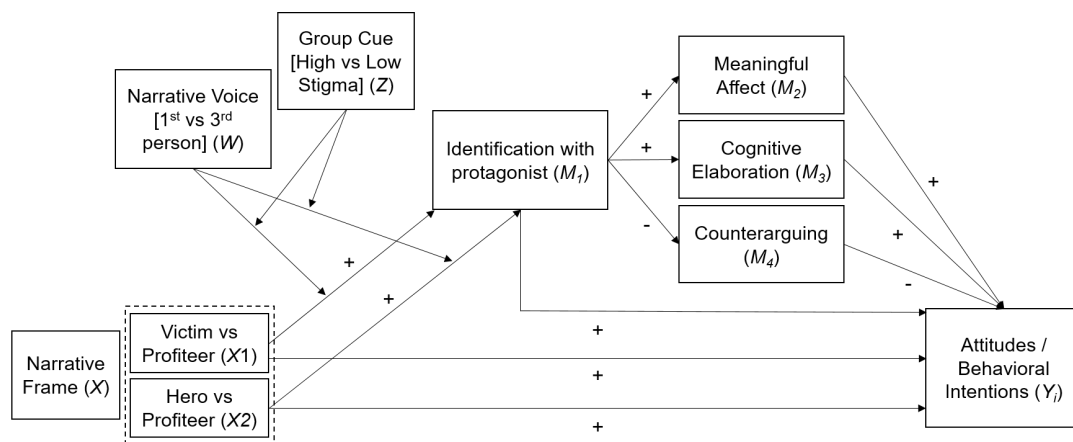
Note. The model includes serial and parallel mediation with 4 mediators, and a three-way interaction. X, M, Y, W and Z represent independent, mediator, dependent and 2 moderator variables, respectively.

Experiment 1

Method

Participants and Procedure

The sample consisted of 1502 people born in Spain (ages 18-88; M = 43.35; SD = 13.46) whose fathers and mothers were also born in Spain (inclusion criteria). There were 740 men and 759 women (and 3 people who defined themselves as non-binary or third gender) and were recruited through *Qualtrics*. Concerning participants' highest attained educational level, 6.3% reported completed primary studies, 31.8% secondary studies, 10.8% technical training studies (Vocational Training, cycle or training module), 16.3% university studies, and

34.8% master or PhD. In regards to job status, 70.2% reported being in active employment, 10.3% unemployed; the rest, retirement, studying, or unpaid domestic work.

This online experiment consisted on reading the testimony of an immigrant male in Spain, centering in his work life, and it took 15.3 minutes (SD = 7.38 minutes) on average to be completed. The experimental manipulation involved the presentation of differential elements of the narratives (i.e., 12 possibilities), while maintaining the central issues across them. It consisted of a 3 (Narrative frame: Profiteer, Victim or Hero) x 2 (Group cue: Morocco or Ecuador) x 2 (Narrative voice: 1st person or 3rd person) between-subject factorial design. Concerning the group cue, we used these countries because both are present and recognizable nationalities in Spain, and because of the differences in the stigmatization they have (i.e., Spanish people hold more negative overall stereotypes towards Moroccan people; see Cea D'Ancona, 2007).

To see the testimonials and all the materials used for each conditions, together with the data, syntax, surveys and supplemental analyses, see our Supplemental Online Materials (SOM) at: https://osf.io/pn94w/?view_only=4b16384c5eed4a209c4231ead929ad98). Subsequently, participants responded a series measures aimed at analyzing the experimental manipulation and its effects. All of the material used here was pilot tested on a sample of 361 people to analyze the comprehension, credibility and correct understanding of the testimonies (see SOM).

Measures

The order of the measures in regard to the experimental manipulation were the following: items measuring demographics, Modern Racism, Ten-Item Personality Inventory and Intergroup Contact were answered before reading random assignation to the conditions; the rest of the scales (i.e., from Content checks), were answered after it.

Demographics. First, participants answered several demographic questions concerning their birth country –as well as their parents'–, their age, gender, educational level, political ideology, and region of residence.

Content Checks. We used 10 items to check different aspect of the content of the narratives. In order to evaluate the protagonist's name, age, country of origin, as well as the narrative voice used, we used 4 items and each of them were multiple-choice. Concerning to what each framing aimed at producing (i.e., Profiteer, Victim, and Hero), we used 6 items on a Likert scale from 1 (Totally disagree) to 7 (Totally agree). These items were aimed at analyzing the threatening (e.g., *The protagonist of the story misuses social benefits*), victimizing (e.g., *This story shows the suffering caused by discrimination*), and heroic content (e.g., *The story is a clear example of work, effort and self-improvement*) with two items each. Reliabilities for each the content were r = .77 (M = 3.29; SD = 1.95), .72 (M = 4.32; SD = 1.79), and .86 (M = 4.68; SD = 1.97) (all ps < .001), respectively.

Identification with the Protagonist (Igartua et al., 2019; Igartua & Cachón-Ramón, 2023; Igartua & Guerrero-Martín, 2022). Eleven items assessed the degree in which the readers psychologically identified with the protagonist (e.g., *I have imagined how I would act if I were in [Saîd/Edison's] place*, or *I have felt worried about what was happening to [Saîd/Edison]*), using a 1 (Not at all) to 5 (A lot) Likert scale. Reliability was α = .94 (M = 2.97; SD = 0.95).

Emotional Reactions (Oliver et al., 2012; Fredrickson, 2009). We used 17 items to measure different forms of affect as a response to the testimonies. The items were grouped in the dimensions of Meaningful affect (i.e., touched, moved, inspired), positive affect (e.g., cheerful, happy,

joyful), and negative affect (e.g., sad, gloomy, angry) on a 1 (Not at all) to 7 (A lot) Likert scale. Reliabilities for each dimension were α = .95 (*M* = 4.06; *SD* = 1.68), .91 (*M* = 3.31; *SD* = 1.62), and .85 (*M* = 3.63; *SD* = 1.43), respectively.

Cognitive Elaboration (Igartua, 2010; Igartua & Guerrero-Martín, 2022; Moyer-Gusé & Nabi, 2010). Three items were used to assess the degree of cognitive reflection during reading the testimony on a 1 (Totally disagree) to 7 (Totally agree) Likert scale (e.g., *As I read the narrative, I reflected intensely on the issue of immigration*). Reliability was α = .88 (*M* = 3.82; *SD* = 1.42).

Counterarguing (Igartua & Cachón-Ramón, 2023). Three items evaluated participants' level of agreement with arguments against the testimony (e.g., *While reading the message, I thought that the information in [Saîd/Edison]'s account was inaccurate, misleading, or exaggerated*), on a Likert scale from 1 (Totally disagree) to 7 (Totally agree). Reliability was α = .74 (*M* = 3.82; *SD* = 1.42).

Intention to Share the Narrative (Barbour et al., 2016; adapted by Igartua et al., 2017). Six items showing the willingness to share the testimony to others through the Internet on a 1 (Totally disagree) to 7 (Totally agree) Liker scale. Reliability was α = .94 (*M* = 4.29; *SD* = 1.62).

Feeling Thermometer (Wojcieszak et al., 2020). Feelings from 0 (very cold) to 100 (very warm) to different groups (e.g., Bankers, Teachers, Clergy). To comprise a more robust measure of feelings, we averaged the feelings towards Immigrants and towards Refugees. Reliability was *r* = .67, *p* < .001 (*M* = 62.12; *SD* = 24.28).

Money Allocation Task (Ad-hoc). This task consisted on allocating 100 euros (annually) to different organizations (e.g., ecologist organization, political party, association to help immigrants). For the implication of this study, we focused on the money allocated to an association oriented at helping immigrants (*M* = 20.78; *SD* =18.27)

Help Intentions (Igartua & Guerrero-Martín, 2022). Four items were used to measure the willingness to collaborate with different NGOs in Spain that provide assistance (e.g., *I am considering actively collaborating as a volunteer in an NGO supporting immigrants*) to immigrants, on a 1 (Totally disagree) to 7 (Totally agree) Liker scale. Reliability was α = .91. (*M* = 3.66; *SD* = 1.60).

Data Analyses

All analyses were conducted in SPSS (IBM Corp., 2017) and comprised comparison among groups in the variables of interest through Chi-square and ANOVA tests. Concerning the indirect conditional effect analyses, we used the PROCESS macro for SPSS (Hayes, 2022) which allows for the analysis of conditional indirect effects through bootstrapping-based inference. Since narrative frame was a multicategorical variable, it was encoded to generate two dummy variables (X1 and X2, see Figure 1), with the profiteer condition set as the reference category: X1 (Profiteer = 0, Victim = 1, Hero = 0) and X2 (Profiteer = 0, Victim = 0, Hero = 1). We created the full conditional indirect-effect model using a customized matrix (see the SPSS syntax in SOM) to test the hypotheses and conducted the analyses using 95% percentile bootstrap confident intervals with 10,000 samples, to a more robust test of the statistical inference.

Results

Manipulation Checks

As it can be seen in the SOM, there were no differences across the conditions (i.e., the 12 possible conditions) in terms of gender, educational level, employment status. Additionally, there were no differences in participant's age and self-

reported political identity across groups. When comparing the experimental conditions as a function of the frame (i.e., frames associated with threat, victimization, and heroism), results revealed differences between conditions on items assessing threat (F(2, 1499)= 632.98, $p < .001$, $\eta^2 = .458$), victimization (F(2, 1499)= 317.94, $p < .001$, $\eta^2 = .298$), and heroism (F(2, 1499)= 700.59, $p < .001$, $\eta^2 = .483$). All differences were in the expected directions.

Finally, Chi-squared tests revealed significant associations between participants' recalling of the protagonist's name (χ^2(5, $N = 1502$) = 1313.71, $p < .001$), origin (χ^2(5, $N = 1502$) = 1323.15, $p < .001$) and the narrative voice used (χ^2(1, $N = 1502$) = 1124.05, $p < .001$) with each of the manipulated factors (i.e., protagonist's origin and narrative voice used). Taking these results together, we conclude that the experimental manipulation was successful in terms of their original purpose and the understanding among participants.

Figure 2

Full conditional indirect effects of narrative frame on intention to share the narrative (Experiment 1)
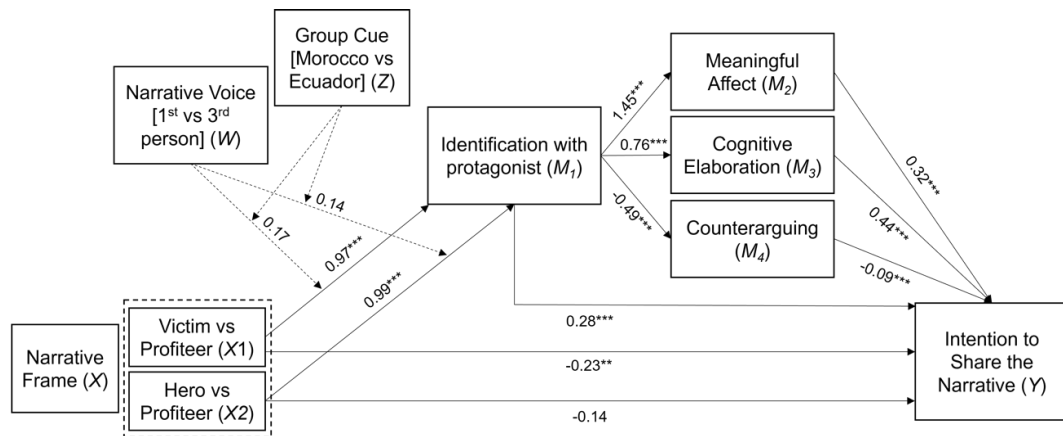
Note. X1 and X2 are dummy coded variables with the reference group frame is Profiteer (in X1, Profiteer = 0, Victim = 1, Hero = 0; in X2, Profiteer = 0, Victim = 0, Hero = 1). *, **, and ***, indicate p values of <.05, <.01, and <.001, respectively. Dotted lines indicated non-significant relations (i.e., $p > .05$).

Main Analyses

When analyzing the full models (see Appendices, and SOM; Supplemental Tables S7-S10), we observed that participants who read either the victim or the hero frame (compared to the profiteer) reported a stronger identification with the protagonist of the story ($B = 0.97$ and 0.99, respectively; p-values < .001). In the same vein, they reported an increased willingness to share the story ($B = 0.88$ and 1.04, respectively; p-values < .001), more positive attitudes towards immigrants ($B = 4.61$ and 4.64, respectively; p-values < .05), and were more prone to allocate money to help immigrants ($B = 6.68$ and 5.11, respectively; p-values < .001) and help them volunteering through an NGO ($B = 0.26$ and 0.28, respectively; p-values < .05). Therefore, we found strong support for Hypotheses H1.1, H1.2, H2.1, and H2.2.

Figure 3

*Full conditional indirect effects of narrative frame on feeling thermometer (Experiment 1)*
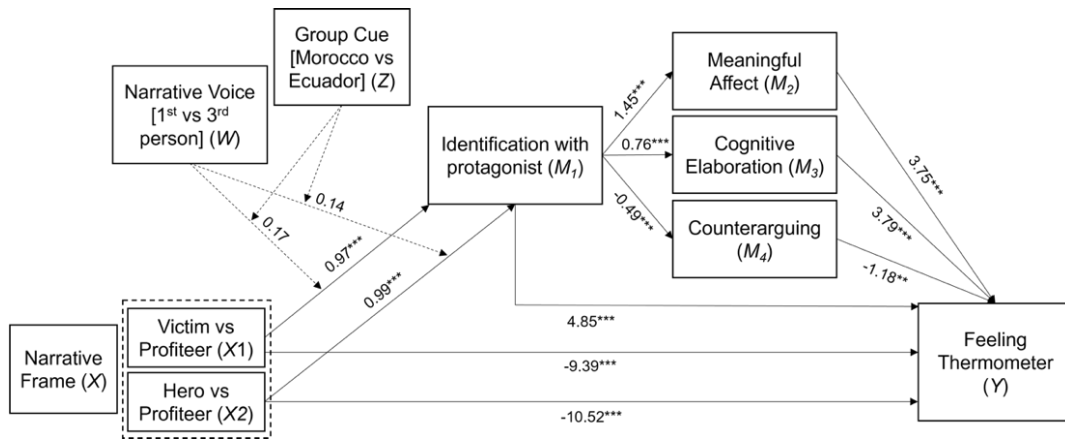
Note. X1 and X2 are dummy coded variables with the reference group frame is Threat (in X1, Profiteer = 0, Victim = 1, Hero = 0; in X2, Profiteer = 0, Victim = 0, Hero = 1). *, **, and ***, indicate *p* values of <.05, <.01, and <.001, respectively. Dotted lines indicated non-significant relations (i.e., *p* > .05).

When analyzing the paths of the effects, that is, the indirect effects of the frames through the mediators (Figures 2-5), we observe significant effects via all the proposed mediators. First, both victim and hero frames (compared to profiteer) provoked a stronger identification with the protagonist of the story among participants and through this identification, greater levels of intentions to share the testimony, more positive outgroup attitudes (i.e., feeling thermometer), and helping intentions (i.e., money allocation and volunteering).

Figure 4

Full conditional indirect effects of narrative frame on money allocation (Experiment 1)
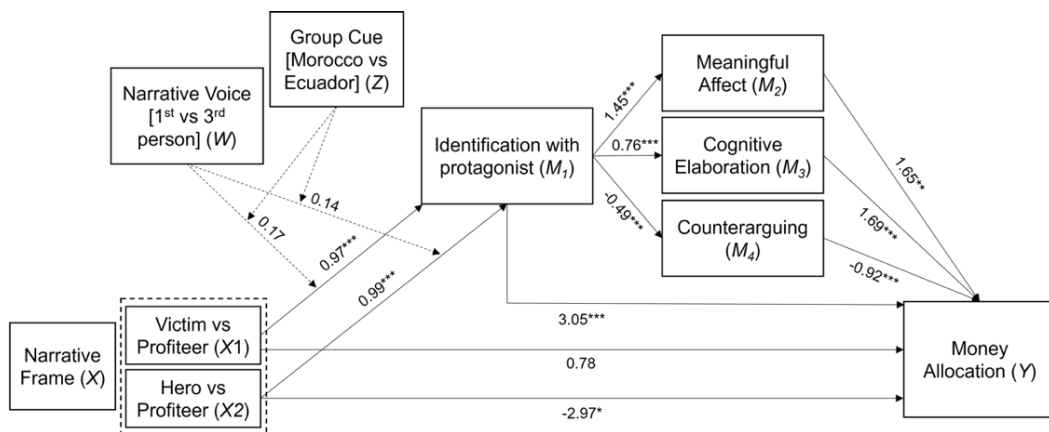
Note. X1 and X2 are dummy coded variables with the reference group frame is Threat (in X1, Profiteer = 0, Victim = 1, Hero = 0; in X2, Profiteer = 0, Victim = 0, Hero = 1). *, **, and ***, indicate *p* values of <.05, <.01, and <.001, respectively. Dotted lines indicated non-significant relations (i.e., *p* > .05).

In addition, we corroborated sequential and parallel mediation effects hypothesized. After an increased identification with the protagonist due to reading the victim and hero testimonies, participants reported more positive attitudes and helping intentions through increased meaningful affect and cognitive elaboration. In the case of the sequential mediation through increased identification

and lower levels of counterarguing, on the other side, we found significant effects on all dependent variables with the exception of intentions to volunteer in an NGO. In all, these results strongly support Hypotheses H3.1, H3.2, H3.3 and to a lesser extent, H3.4.

Finally, the index of moderated-moderated mediation (i.e., IMMM) was non-significant indicating that the narrative voice and the group cue did not condition the effects of the narrative frame –and neither have direct effects on any variable (see Table S4). Therefore, we did not find support for H4 concerning three-way interaction between the moderators of the experiment.

Figure 5

Full conditional indirect effects of narrative frame on helping intentions (Experiment 1)
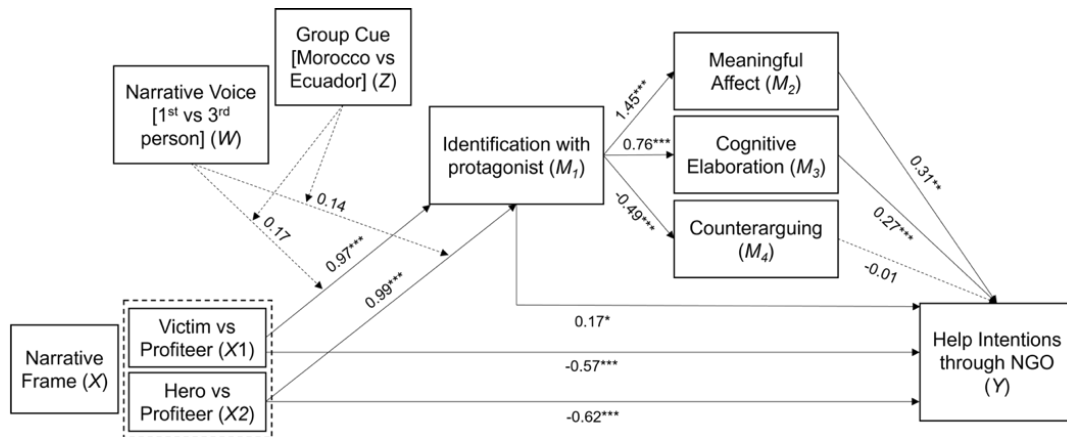
Note. X1 and X2 are dummy coded variables with the reference group frame is Threat (in X1, Profiteer = 0, Victim = 1, Hero = 0; in X2, Profiteer = 0, Victim = 0, Hero = 1). *, **, and ***, indicate *p* values of <.05, <.01, and <.001, respectively. Dotted lines indicated non-significant relations (i.e., *p* > .05).

Experiment 2: A Replication

Method

Participants and Procedure

The Hungarian study was an exact replication of Experiment 1 concerning all used materials (i.e., manipulation, scales) and analytical approach. The sample consisted of 960 people born in Hungary (ages 18-80; *M* = 41.45; *SD* = 13.64) whose fathers and mothers were also born in Hungary. There were 461 men and 497 women, (and 2 people who did not want to indicate their gender). The participants were recruited through *Qualtrics*, following the same criteria for inclusion (i.e., participants and their parents having being born in Hungary).

Concerning participants' highest attained educational level, 2.3% reported completed primary studies, 24.5% secondary studies, 27.6% technical training studies (Vocational Training, cycle or training module), 36.4% university studies, and 9.3% master or PhD. In regards to job status, 74.2% reported being in active employment, 11.0% unemployed; the rest, either in retirement, studying or were unpaid domestic workers.

The experiment was answered, on average, in 16.08 minutes (*SD* = 7.72 minutes), and the only difference here was that, compared to Experiment 1, the group cue manipulation included different countries of origin for the protagonist to match the cultural reality, while maintaining the difference in the stigmatization levels. Therefore, we used for this variable stories with a protagonist

either from Syria (i.e., more culturally distant and thus, more stigmatized) or from Ukraine (i.e., less culturally distant and thus, less stigmatized). Finally, and as it was done with Experiment 1, all materials were tested in a pilot study of 260 people with similar characteristics to evaluate the comprehension, credibility, and understanding (see SOM).

Measures

The scales used and their presentation order were the same as in Experiment 1. First, participants answered demographic questions concerning their birth country –as well as their parents'–, their age, gender, educational level, political ideology, and region of residence.

Subsequently, *Content checks* items to evaluate the threatening, victimizing, and heroic frames had the following reliabilities: .81 (M = 2.96; SD = 1.89), .73 (M = 3.91; SD = 1.81), and .77 (M = 4.43; SD = 1.87) (all ps < .001), respectively. After reading the testimonial message, the participants completed the following measures: *Identification with the protagonist* (Igartua et al., 2019; Igartua & Cachón-Ramón, 2023; Igartua & Guerrero-Martín, 2022; α = .94; M = 2.83: SD = 0.91); *emotional reactions* (Oliver et al., 2012; Fredrickson, 2009) used to evaluate meaningful (α = .96; M = 3.74; SD = 1.79), positive (α = .93; M = 2.87; SD = 1.61), and negative affect (α = .86; M = 3.40; SD = 1.43); *cognitive elaboration* (Igartua, 2010; Igartua & Guerrero-Martín, 2022; Moyer-Gusé & Nabi, 2010; α = .87; M = 3.84; SD = 1.52); *counterarguing* (Igartua & Cachón-Ramón, 2023; α = .81; M = 3.60; SD = 1.50); *intention to share the narrative* (Barbour et al., 2016; adapted by Igartua et al., 2017; α = .94; M = 4.29; SD = 1.62); *feeling thermometer* (Wojcieszak et al., 2020; M = 38.43; SD = 26.38); *money allocation task* (Ad-hoc) (M = 9.07, SD =13.76); and, finally, *help intentions* (Igartua & Guerrero-Martín, 2022; α = .88; M = 2.80; SD = 1.48).

Data Analyses

All data analyses were the same as those presented in Experiment 1.

Results

Manipulation Checks

As in Experiment 1, we found no differences among the conditions in gender, educational level or employment status. Additionally, there were no differences in participant's age and self-reported political identity across groups (see SOM). Then, the analysis of the manipulation concerning the content (i.e., threatening, victimizing or heroism) revealed differences across conditions in the analysis of threat ($F_{(2, 257)}$=437.19, p < .001, η^2 = .477), victimization ($F_{(2, 257)}$= 207.34, p < .001, η^2 = .302), and heroism ($F_{(2, 257)}$= 315.57, p < .001, η^2 = .397). All the differences were in the expected directions and, taken as a whole, we consider the experimental manipulation was successful.

Main Analyses

Results of the full models (see Appendices, and SOM; Supplemental Tables S16-S19) indicated that participants who read either the victim or the hero frame (compared to the profiteer) reported stronger identification with the protagonist of the story (B = 0.72 and 0.71, respectively; p-values < .001). In the same vein, they reported an increased willingness to share the story (B = 0.52 and 0.64, respectively; p-values < .001) and more positive attitudes (B = 6.89 and 5.51, respectively; p-values < .01). Additionally, those who read the hero story (compared to the profiteer), also reported greater values in the money allocation task (B = 2.71, p < .05). With these results, we find strong support for Hypotheses H1.1 and H1.2 (i.e., identification-related hypotheses), as well as for H2.1 (i.e., improved attitudes), but a

lesser support for H2.2 (helping intentions with money and volunteering).

Figure 6

Full conditional indirect effects of narrative frame on intention to share the narrative (Experiment 2)
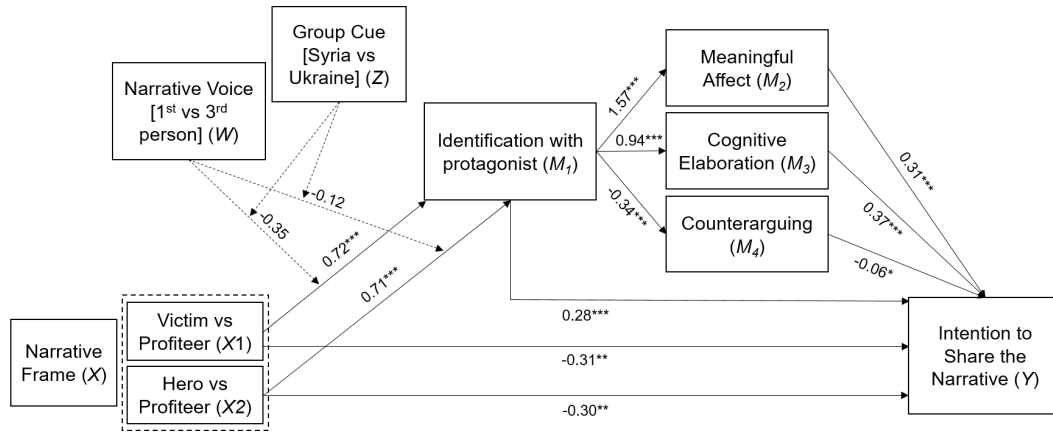
Note. X1 and X2 are dummy coded variables with the reference group frame is Profiteer (in X1, Profiteer = 0, Victim = 1, Hero = 0; in X2, Threat = 0, Victim = 0, Hero = 1). *, **, and ***, indicate *p* values of <.05, <.01, and <.001, respectively. Dotted lines indicated non-significant relations (i.e., *p* > .05).

Figure 7

Full conditional indirect effects of narrative frame on feeling thermometer (Experiment 2)
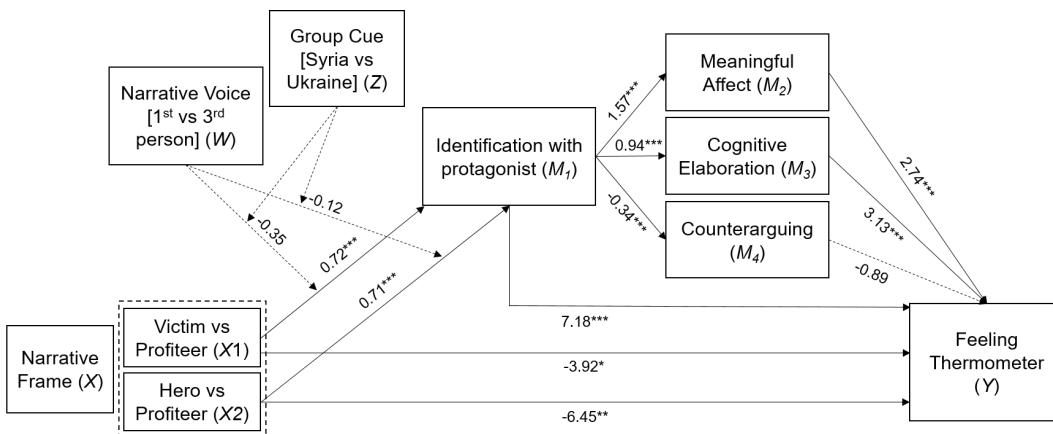
Note. X1 and X2 are dummy coded variables with the reference group frame is Threat (in X1, Profiteer = 0, Victim = 1, Hero = 0; in X2, Profiteer = 0, Victim = 0, Hero = 1). *, **, and ***, indicate *p* values of <.05, <.01, and <.001, respectively. Dotted lines indicated non-significant relations (i.e., *p* > .05).

When analyzing the paths of the effects, that is, the indirect effects of the frames through the mediators (Figures 6-9), we observe significant effects via all mediators proposed, as in Experiment 1. First, compared to reading the profiteer story, participants who read either the victim or the hero story reported greater identification and subsequently, greater levels in the intentions to share the testimony, more positive outgroup attitudes and helping intentions (i.e., money allocation and volunteering). Additionally, after this increased identification with the protagonist of the story, participants in these conditions reported higher levels of positive attitudes and helping intentions through increased meaningful affect and

cognitive elaboration. In the case of the sequential mediation through increased identification and lower levels of counterarguing, on the other side, we found

significant effects on all dependent variables with the exception of feelings thermometer. Overall, we find substantial support for Hypotheses H3.1-H3.4.
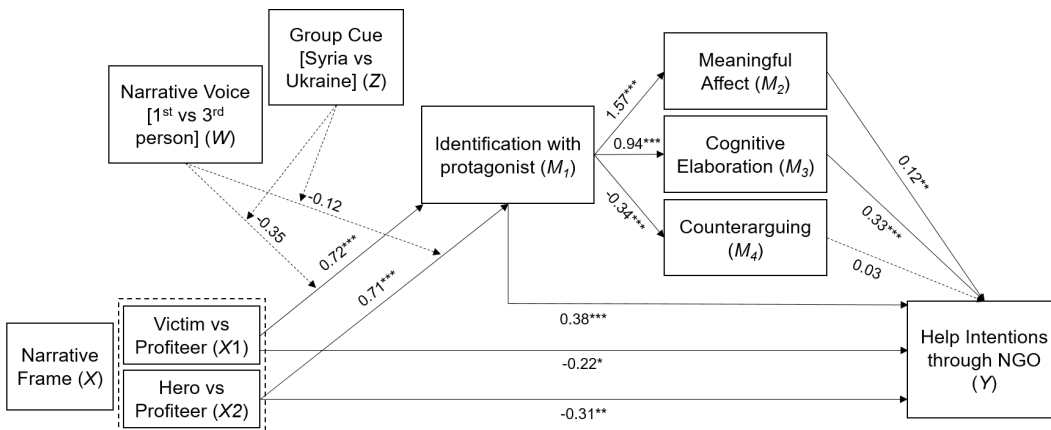
Figure 8

Full conditional indirect effects of narrative frame on money allocation (Experiment 2)
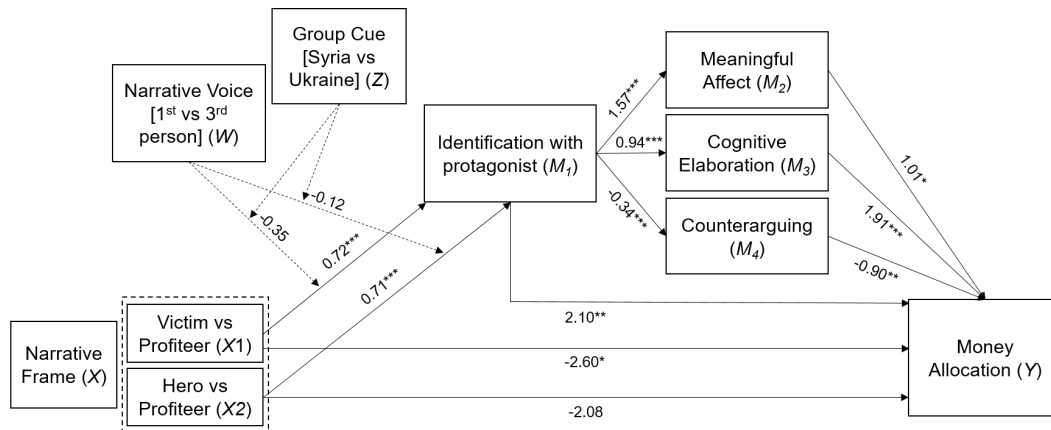
Note. X1 and X2 are dummy coded variables with the reference group frame is Threat (in X1, Profiteer = 0, Victim = 1, Hero = 0; in X2, Profiteer = 0, Victim = 0, Hero = 1). *, **, and ***, indicate *p* values of <.05, <.01, and <.001, respectively. Dotted lines indicated non-significant relations (i.e., *p* > .05).

Figure 9

Full conditional indirect effects of narrative frame on helping intentions (Experiment 2)

Note. X1 and X2 are dummy coded variables with the reference group frame is Threat (in X1, Profiteer = 0, Victim = 1, Hero = 0; in X2, Profiteer = 0, Victim = 0, Hero = 1). *, **, and ***, indicate *p* values of <.05, <.01, and <.001, respectively. Dotted lines indicated non-significant relations (i.e., *p* > .05).

Finally, and as it happened in Experiment 1, all indexes of moderated-moderated mediation (i.e., IMMM) were non-significant, and thus, we did not find support for Hypothesis H4 concerning three-way interaction between the frames, group cue (i.e., country of origin) and

narrative voice, and neither direct effects of these variables on mediators nor dependent variables (Supplemental Table S11).

General Discussion and Conclusions

The persuasive and expansive effect of immigration testimonials have been

corroborated through two experiments in very distinctive socio-cultural contexts. These effects not only demonstrate the effectiveness of the testimonials in the context of work immigration, but also the way in which immigration testimonials are framed, and the pathways by which these effects operate. Interestingly, the effects are not dependent on the narrative voice or the group cue used.

Identification with the Protagonist: Main Mediator

First, we have found that immigration testimonies that emphasize a story of victimhood and heroism (as opposed to one of profiteering) produce psychological effects that may ultimately improve intergroup relations between hosts and immigrants. This, in turn, is demonstrated using diverse narrative voices (i.e., 1st and 3rd person), and immigrants from different countries (i.e., Moroccans and Ecuadorians in Spain, and Syrian and Ukrainians in Hungary). Concerning the latter, additionally, the use of different origin countries implies a clear differentiation of stigmatization levels in both cultures (e.g., Cea D'Ancona, 2007; Meuleman et al., 2009), demonstrating thus the robustness of the effects. Unlike a testimony that frames the immoral use of resources, reading a testimony about a victim or hero increases our identification with the protagonists. As expected and derived from various theoretical-empirical traditions that explain the formation and scope of common identification (e.g., Turner et al., 1987; Park, 2012; Balliet et al., 2014), these examples motivate a response of increased connection with a member of the outgroup. In turn, this can be extended to a larger group, and generate a number of psychological effects.

Regarding the effects of narrative framing on identification, it is necessary to examine the unique contribution of the experimental conditions. In the case of the victimization-related story, to begin with,

the central theme produces appraisals related to injustice leading to greater anger (i.e., greater negative affect, see SOM), which may induce greater empathy (e.g., Snyder & Dwyer, 2013) and thus, explain both the effects on identification with the protagonist as well as the direct effects on the dependent variables. On the other hand, the topic of heroism (i.e., overcoming difficulties and portraying a moral character) focuses on a competence- and skill-based description (Henrich & Gil-White, 2001) and produces, as expected (Onu et al., 2016), greater meaningful affect (see SOM). Interestingly, this path is also able to orientate individuals towards more affiliative intentions and prosociality (Algoe & Haidt, 2009; Stellar et al., 2017).

In turn, this increased identification with the protagonist of the story directly affects a series of variables that are key for intergroup relations. This is because they range from simple gestures that favor intergroup relations (i.e., sharing a story online), attitudes towards the whole collective (i.e., attitude thermometer), to more demanding forms of help, such as the intentions to distributing money, or by showing willingness to participate in volunteering. In addition, it is worth noting the stability of the effects found (i.e., in Spain and Hungary), were host-immigrant relationships and attitudes immigrants vary greatly (see Cea D'Ancona, 2007; Meuleman et al., 2009). Therefore, a short testimony as the ones employed here can be considered transformative tools with a great capacity to improve intergroup relations (Park, 2012).

Ripple Effects: Subsequent Effects via Affect and Cognitive Responses

On the other hand, these experiments corroborate a *domino –or ripple– effect*. This effects initiates by an increased identification with the protagonist and then, it involves simultaneously three additional paths: emotional reactions, cognitive investment, and counterarguing.

First, framing testimonies directly impacts recipients' emotions (see SOM) and indirectly through increased identification leading to greater intensities of meaningful affect (Oliver et al., 2012). In the form of *moral elevation* or *awe*, this emotionality has been proved to improve intergroup attitudes and promote prosocial behaviors (Igartua et al., 2023). In addition, these emotions can further increase well-being and predisposition to connect and affiliate with others (Stellar et al., 2017). This form, the emotional path corroborated here is not only beneficial for improving inter-group relations, but also for the recipients of testimonies.

In relation to the cognitive responses, on the other hand, stronger identification with the protagonist of the story will affect the form we process the information from the testimonies. Specifically, we are more drawn to think deeply about what we are reading, while we form less counterarguments, which in turn, resembles a central (compared to a peripheral) route for involvement and persuasion (Petty et al., 2009; Slater & Rouner, 2002). It is also noted that counterarguing can be considered as a dependent variable in itself –as some studies do; see Watts et al. (2023). By itself, this variable may demonstrate the degree of acceptance of a testimonial, but it does not necessarily mediate the effects of identification on attitudes and intentions to help. In particular, all analyses of the model presented here show decreased levels of counterarguing as a function of greater identification with the protagonist (see also Igartua & Cachón-Ramón, 2023; Igartua & Rodríguez-Contreras, 2020). However, in several cases, we did not find indirect effects through this variable on attitudes, resource distribution or intention to help. This is also observed when replicating the analyses with co-variables such as levels of modern racism, political orientation or openness of the participants (see SOM).

Lack of Three-Way Interaction: Limitations and Future Research

Finally, it is necessary to acknowledge that we did not find any effects of the narrative voice or the group cue; neither direct effects (see SOM), nor interaction effects proposed in the full model. Together with the rest of the effects, this could be considered as an important finding that demands explanation and further tests.

In both experiments, we found no group cue effects, which would indicate some relationship of perceived closeness. In the particular Spanish case, it has been shown differential attitudes towards immigrants from Morocco and Ecuador generate differentiated attitudes (Cea D'Ancona, 2007). In the Hungarian context, conversely, it has been shown that, compared to other European countries, Hungarians often report negative overall attitudes towards immigrants (Meuleman et al., 2009). Therefore, the stable lack of group cue effects should be further investigated in the context of intergroup relations.

Additionally, the point of view or narrative voice employed had no effect on the dependent variables (see SOM), on the identification with the protagonist, nor in interacting with the group cue. Importantly, this variable has been constantly presented as a relevant moderator in narrative persuasion (see Chen & Bell, 2022) and likely to interact with group cue (see Huang et al., 2023) and yet, we did not find effects in two different and large samples. As in the case with group cue, this lack of effects should be further investigated because –as Christy (2018) states– the topic of intergroup relations may be highly idiosyncratic and may require a better fine-tuning of hypothesis in the context of testimonial narratives. At the same time, the lack of effects and interaction between these variables indirectly adds greater relevance to the main effects presented and replicated here. This is because the patterns found are

not likely to be a statistical artifact –they replicate across samples, and analyses; see SOM. On the contrary, the effects presented here corroborate an alternative and (possibly) complementary pathway to the perceived similarity and narrative voice hypotheses (e.g., Cohen et al., 2018; see also Huang et al., 2023): one based differential psychological responses conveying in a common identification and a subsequent cascade of emotions and cognitive reactions.

In conclusion, the power of testimonial narratives to influence intergroup relations is undeniable. Our experiments reveal that framing these testimonies with themes of victimhood and heroism, rather than profiteering, can produce a cascade of effects that ultimately help promoting better relations between hosts and immigrants. Additionally, the robustness of these paths entails higher levels of cognitive processing and meaningful affect, benefiting both intergroup relations and the well-being of narrative recipients.

Intriguingly, our experiments did not yield effects related to narrative voice or group cues, which challenges prevailing notions in narrative persuasion. In all, this prompts further exploration to comprehend the idiosyncrasies of intergroup relations between hosts and immigrants, and the unique pathways by which immigration testimonials can influence attitudes and intentions to help. Overall, our research underscores the potential for immigration-related testimonials as transformative tools that can bridge gaps between communities and foster better relationships.

Footnotes

[1] Sometimes it has been referred to as *parasocial* (e.g., Schiappa et al., 2005) or mediated (Ortiz & Harwood, 2007) intergroup contact –i.e., observing or being exposed to outgroup members' information– or even vicarious (e.g., Schemer & Meltzer, 2020) intergroup contact –i.e., seeing intergroup interactions among members of the ingroup and outgroup. In all, the central tenet refers to the positive intergroup effects facilitated by exposure to the story of an outgroup's member.

[2] Full pre-registration (i.e., theoretical rationale, sample size, hypotheses and statistical analyses, and selection criteria) is available on: [OMITTED LINK]. This study was approved by the Ethical Board of the OMITTED University (ref: OMITTED). All of the materials used in the studies (i.e., surveys and experimental materials) as well as their data, syntax, and supplemental analyses, can be freely accessed in our project's page at: https://osf.io/pn94w/?view_only=4b16384 c5eed4a209c4231ead929ad98

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Appendices

(a) Dependent variable: Sharing Intentions (Experiment 1)

	Effect	Boot *LLCI*	Boot *ULCI*		Effect	Boot *LLCI*	Boot *ULCI*
Relative Conditional Specific Indirect Effects of Narrative Frame on Sharing Intentions via *Identification with the Protagonist*							
*X*1-3rd person-Morocco	0.28	0.16	0.41	*X*2-3rd person-Morocco	0.29	0.16	0.43
*X*1-3rd person-Ecuador	0.26	0.14	0.39	*X*2-3rd person-Ecuador	0.27	0.15	0.41
*X*1-1st person-Morocco	0.25	0.13	0.38	*X*2-1st person-Morocco	0.25	0.14	0.39
*X*1-1st person-Ecuador	0.28	0.15	0.42	*X*2-1st person-Ecuador	0.28	0.15	0.42
IMMM	0.05	-0.07	0.18	IMMM	0.04	-0.08	0.17
Relative Conditional Specific Indirect Effects of Narrative Frame on Sharing Intentions via *Identification with the Protagonist → Meaningful Affect*							
*X*1-3rd person-Morocco	0.47	0.33	0.62	*X*2-3rd person-Morocco	0.48	0.35	0.63
*X*1-3rd person-Ecuador	0.44	0.31	0.57	*X*2-3rd person-Ecuador	0.46	0.33	0.60
*X*1-1st person-Morocco	0.41	0.29	0.55	*X*2-1st person-Morocco	0.42	0.29	0.56
*X*1-1st person-Ecuador	0.46	0.34	0.61	*X*2-1st person-Ecuador	0.47	0.34	0.61
IMMM	0.08	-0.12	0.28	IMMM	0.07	-0.13	0.27
Relative Conditional Specific Indirect Effects of Narrative Frame on Sharing Intentions via *Identification with the Protagonist → Cognitive Elaboration*							
*X*1-3rd person-Morocco	0.33	0.24	0.43	*X*2-3rd person-Morocco	0.34	0.25	0.44
*X*1-3rd person-Ecuador	0.31	0.23	0.40	*X*2-3rd person-Ecuador	0.33	0.25	0.41
*X*1-1st person-Morocco	0.29	0.21	0.39	*X*2-1st person-Morocco	0.30	0.21	0.40
*X*1-1st person-Ecuador	0.33	0.25	0.42	*X*2-1st person-Ecuador	0.33	0.25	0.42
IMMM	0.06	-0.09	0.20	IMMM	0.05	-0.09	0.19
Relative Conditional Specific Indirect Effects of Narrative Frame on Sharing Intentions via *Identification with the Protagonist → Counterarguing*							
*X*1-3rd person-Morocco	0.04	0.02	0.07	*X*2-3rd person-Morocco	0.04	0.02	0.07
*X*1-3rd person-Ecuador	0.04	0.02	0.07	*X*2-3rd person-Ecuador	0.04	0.02	0.07
*X*1-1st person-Morocco	0.04	0.02	0.06	*X*2-1st person-Morocco	0.04	0.02	0.07
*X*1-1st person-Ecuador	0.04	0.02	0.07	*X*2-1st person-Ecuador	0.04	0.02	0.07
IMMM	0.01	-0.01	0.03	IMMM	0.01	-0.01	0.03

Note. *X*1 and *X*2 are dummy coded variables with the reference group frame is Profiteer (in *X*1, Profiteer = 0, Victim = 1, Hero = 0; in X2, Profiteer = 0, Victim = 0, Hero = 1). IMMM = Index of Moderated-Moderated Mediation (i.e., difference between conditional indirect effects).

(b) Dependent variable: Feeling Thermometer (Experiment 1)

	Effect	Boot *LLCI*	Boot *ULCI*		Effect	Boot *LLCI*	Boot *ULCI*
			Relative Conditional Specific Indirect Effects of Narrative Frame on Feeling Thermometer via				
			Identification with the Protagonist				
*X*1-3rd person-Morocco	4.89	2.67	7.42	*X*2-3rd person-Morocco	5.05	2.77	7.63
*X*1-3rd person-Ecuador	4.60	2.57	6.85	*X*2-3rd person-Ecuador	4.84	2.66	7.19
*X*1-1st person-Morocco	4.36	2.31	6.69	*X*2-1st person-Morocco	4.45	2.33	6.84
*X*1-1st person-Ecuador	4.89	2.68	7.37	*X*2-1st person-Ecuador	4.92	2.66	7.41
IMMM	0.82	-1.26	3.15	Test of effects	0.69	-1.39	3.06
			Relative Conditional Specific Indirect Effects of Narrative Frame on Feeling Thermometer via				
			Identification with the Protagonist → Meaningful Affect				
*X*1-3rd person-Morocco	5.46	3.36	7.80	*X*2-3rd person-Morocco	5.63	3.58	7.96
*X*1-3rd person-Ecuador	5.13	3.17	7.28	*X*2-3rd person-Ecuador	5.39	3.38	7.61
*X*1-1st person-Morocco	4.86	2.91	7.10	*X*2-1st person-Morocco	4.96	2.97	7.24
*X*1-1st person-Ecuador	5.45	3.41	7.70	*X*2-1st person-Ecuador	5.49	3.47	7.64
IMMM	0.92	-1.43	3.41	IMMM	0.77	-1.61	3.19
			Relative Conditional Specific Indirect Effects of Narrative Frame on Feeling Thermometer via				
			Identification with the Protagonist → Cognitive Elaboration				
*X*1-3rd person-Morocco	2.89	1.87	4.11	*X*2-3rd person-Morocco	2.98	1.96	4.15
*X*1-3rd person-Ecuador	2.72	1.78	3.82	*X*2-3rd person-Ecuador	2.85	1.91	3.97
*X*1-1st person-Morocco	2.57	1.65	3.68	*X*2-1st person-Morocco	2.62	1.69	3.72
*X*1-1st person-Ecuador	2.88	1.92	3.98	*X*2-1st person-Ecuador	2.90	1.90	4.03
IMMM	0.49	-0.76	1.81	IMMM	0.41	-0.83	1.76
			Relative Conditional Specific Indirect Effects of Narrative Frame on Feeling Thermometer via				
			Identification with the Protagonist → Counterarguing				
*X*1-3rd person-Morocco	0.58	0.18	1.05	*X*2-3rd person-Morocco	0.60	0.19	1.08
*X*1-3rd person-Ecuador	0.55	0.16	0.99	*X*2-3rd person-Ecuador	0.58	0.18	1.03
*X*1-1st person-Morocco	0.52	0.16	0.96	*X*2-1st person-Morocco	0.53	0.16	0.96
*X*1-1st person-Ecuador	0.58	0.18	1.04	*X*2-1st person-Ecuador	0.59	0.18	1.05
IMMM	0.10	-0.17	0.39	IMMM	0.08	-0.18	0.38

*Note. X*1 and *X*2 are dummy coded variables with the reference group frame is Profiteer (in *X*1, Profiteer = 0, Victim = 1, Hero = 0; in X2, Profiteer = 0, Victim = 0, Hero = 1). IMMM = Index of Moderated-Moderated Mediation (i.e., difference between conditional indirect effects).

(c) Dependent variable: Money Allocation (Experiment 1)

Relative Conditional Specific Indirect Effects of Narrative Frame on Money Allocation via
Identification with the Protagonist

	Effect	Boot *LLCI*	Boot *ULCI*		Effect	Boot *LLCI*	Boot *ULCI*
*X*1-3rd person-Morocco	3.07	1.33	4.97	*X*2-3rd person-Morocco	3.17	1.37	5.09
*X*1-3rd person-Ecuador	2.89	1.26	4.68	*X*2-3rd person-Ecuador	3.04	1.33	4.87
*X*1-1st person-Morocco	2.74	1.19	4.37	*X*2-1st person-Morocco	2.79	1.21	4.52
*X*1-1st person-Ecuador	3.07	1.34	4.92	*X*2-1st person-Ecuador	3.09	1.37	4.94
IMMM	0.52	-0.81	2.05	IMMM	0.44	-0.88	2.00

Relative Conditional Specific Indirect Effects of Narrative Frame on Money Allocation via
Identification with the Protagonist → Meaningful Affect

	Effect	Boot *LLCI*	Boot *ULCI*		Effect	Boot *LLCI*	Boot *ULCI*
*X*1-3rd person-Morocco	2.40	0.92	4.03	*X*2-3rd person-Morocco	2.48	0.98	4.11
*X*1-3rd person-Ecuador	2.26	0.88	3.75	*X*2-3rd person-Ecuador	2.37	0.95	3.90
*X*1-1st person-Morocco	2.13	0.81	3.66	*X*2-1st person-Morocco	2.18	0.83	3.69
*X*1-1st person-Ecuador	2.40	0.93	3.98	*X*2-1st person-Ecuador	2.41	0.96	4.00
IMMM	0.40	-0.65	1.63	IMMM	0.34	-0.69	1.53

Relative Conditional Specific Indirect Effects of Narrative Frame on Money Allocation via
Identification with the Protagonist → Cognitive Elaboration

	Effect	Boot *LLCI*	Boot *ULCI*		Effect	Boot *LLCI*	Boot *ULCI*
*X*1-3rd person-Morocco	1.28	0.65	2.00	*X*2-3rd person-Morocco	1.32	0.68	2.04
*X*1-3rd person-Ecuador	1.21	0.61	1.89	*X*2-3rd person-Ecuador	1.27	0.65	1.96
*X*1-1st person-Morocco	1.14	0.56	1.83	*X*2-1st person-Morocco	1.17	0.58	1.83
*X*1-1st person-Ecuador	1.28	0.65	1.97	*X*2-1st person-Ecuador	1.29	0.66	1.99
IMMM	0.22	-0.34	0.82	IMMM			

Relative Conditional Specific Indirect Effects of Narrative Frame on Money Allocation via
Identification with the Protagonist → Counterarguing

	Effect	Boot *LLCI*	Boot *ULCI*		Effect	Boot *LLCI*	Boot *ULCI*
*X*1-3rd person-Morocco	0.45	0.13	0.81	*X*2-3rd person-Morocco	0.47	0.13	0.85
*X*1-3rd person-Ecuador	0.43	0.12	0.77	*X*2-3rd person-Ecuador	0.45	0.12	0.81
*X*1-1st person-Morocco	0.40	0.11	0.75	*X*2-1st person-Morocco	0.41	0.11	0.76
*X*1-1st person-Ecuador	0.45	0.13	0.82	*X*2-1st person-Ecuador	0.46	0.13	0.83
IMMM	0.08	-0.13	0.31	IMMM	0.06	-0.14	0.31

*Note. X*1 and *X*2 are dummy coded variables with the reference group frame is Profiteer (in *X*1, Profiteer = 0, Victim = 1, Hero = 0; in X2, Profiteer = 0, Victim = 0, Hero = 1). IMMM = Index of Moderated-Moderated Mediation (i.e., difference between conditional indirect effects).

(d) Dependent variable: Help Intentions (Experiment 1)

	Effect	Boot *LLCI*	Boot *ULCI*		Effect	Boot *LLCI*	Boot *ULCI*
			Relative Conditional Specific Indirect Effects of Narrative Frame on Help Intentions via *Identification with the Protagonist*				
*X*1-3rd person-Morocco	0.17	0.02	0.33	*X*2-3rd person-Morocco	0.17	0.34	0.34
*X*1-3rd person-Ecuador	0.16	0.02	0.31	*X*2-3rd person-Ecuador	0.17	0.32	0.32
*X*1-1st person-Morocco	0.15	0.02	0.29	*X*2-1st person-Morocco	0.15	0.30	0.30
*X*1-1st person-Ecuador	0.17	0.02	0.33	*X*2-1st person-Ecuador	0.17	0.33	0.33
IMMM	0.03	-0.05	0.12	IMMM	0.02	-0.05	0.12
			Relative Conditional Specific Indirect Effects of Narrative Frame on Help Intentions via *Identification with the Protagonist → Meaningful Affect*				
*X*1-3rd person-Morocco	0.45	0.30	0.63	*X*2-3rd person-Morocco	0.47	0.32	0.64
*X*1-3rd person-Ecuador	0.43	0.30	0.57	*X*2-3rd person-Ecuador	0.45	0.31	0.60
*X*1-1st person-Morocco	0.40	0.27	0.56	*X*2-1st person-Morocco	0.41	0.27	0.57
*X*1-1st person-Ecuador	0.45	0.31	0.61	*X*2-1st person-Ecuador	0.46	0.32	0.61
IMMM	0.08	-0.12	0.28	IMMM	0.06	-0.13	0.27
			Relative Conditional Specific Indirect Effects of Narrative Frame on Help Intentions via *Identification with the Protagonist → Cognitive Elaboration*				
*X*1-3rd person-Morocco	0.21	0.14	0.29	*X*2-3rd person-Morocco	0.21	0.15	0.29
*X*1-3rd person-Ecuador	0.20	0.13	0.27	*X*2-3rd person-Ecuador	0.20	0.14	0.28
*X*1-1st person-Morocco	0.18	0.12	0.26	*X*2-1st person-Morocco	0.19	0.12	0.26
*X*1-1st person-Ecuador	0.21	0.14	0.28	*X*2-1st person-Ecuador	0.21	0.14	0.28
IMMM	0.03	-0.05	0.13	IMMM	0.03	-0.06	0.12
			Relative Conditional Specific Indirect Effects of Narrative Frame on Help Intentions via *Identification with the Protagonist → Counterarguing*				
*X*1-3rd person-Morocco	0.01	-0.02	0.04	*X*2-3rd person-Morocco	0.01	-0.03	0.04
*X*1-3rd person-Ecuador	0.01	-0.02	0.04	*X*2-3rd person-Ecuador	0.01	-0.02	0.04
*X*1-1st person-Morocco	0.01	-0.02	0.03	*X*2-1st person-Morocco	0.01	-0.02	0.03
*X*1-1st person-Ecuador	0.01	-0.02	0.04	*X*2-1st person-Ecuador	0.01	-0.02	0.04
IMMM	0.00	-0.01	0.01	IMMM	0.00	-0.01	0.01

Note. *X*1 and *X*2 are dummy coded variables with the reference group frame is Profiteer (in *X*1, Profiteer = 0, Victim = 1, Hero = 0; in X2, Profiteer = 0, Victim = 0, Hero = 1). IMMM = Index of Moderated-Moderated Mediation (i.e., difference between conditional indirect effects).

(e) Dependent variable: Sharing Intentions (Experiment 2)

	Effect	Boot *LLCI*	Boot *ULCI*		Effect	Boot *LLCI*	Boot *ULCI*
		Relative Conditional Specific Indirect Effects of Narrative Frame on Sharing Intentions via *Identification with the Protagonist*					
*X*1-3rd person-Syria	0.18	0.07	0.33	*X*2-3rd person-Syria	0.14	0.05	0.26
*X*1-3rd person-Ukraine	0.23	0.10	0.40	*X*2-3rd person-Ukraine	0.23	0.10	0.39
*X*1-1st person-Syria	0.22	0.09	0.37	*X*2-1st person-Syria	0.18	0.07	0.33
*X*1-1st person-Ukraine	0.17	0.07	0.31	*X*2-1st person-Ukraine	0.24	0.11	0.40
IMMM	-0.10	-0.30	0.06	IMMM	-0.03	-0.20	0.11
		Relative Conditional Specific Indirect Effects of Narrative Frame on Sharing Intentions via *Identification with the Protagonist → Meaningful Affect*					
*X*1-3rd person-Syria	0.32	0.17	0.48	*X*2-3rd person-Syria	0.24	0.10	0.40
*X*1-3rd person-Ukraine	0.41	0.26	0.58	*X*2-3rd person-Ukraine	0.41	0.26	0.57
*X*1-1st person-Syria	0.38	0.24	0.55	*X*2-1st person-Syria	0.32	0.19	0.48
*X*1-1st person-Ukraine	0.30	0.15	0.47	*X*2-1st person-Ukraine	0.43	0.28	0.59
IMMM	-0.17	-0.46	0.10	IMMM	-0.06	-0.32	0.19
		Relative Conditional Specific Indirect Effects of Narrative Frame on Sharing Intentions via *Identification with the Protagonist → Cognitive Elaboration*					
*X*1-3rd person-Syria	0.23	0.12	0.35	*X*2-3rd person-Syria	0.17	0.07	0.28
*X*1-3rd person-Ukraine	0.29	0.19	0.41	*X*2-3rd person-Ukraine	0.29	0.20	0.40
*X*1-1st person-Syria	0.27	0.17	0.39	*X*2-1st person-Syria	0.23	0.14	0.33
*X*1-1st person-Ukraine	0.22	0.11	0.33	*X*2-1st person-Ukraine	0.31	0.20	0.42
IMMM	-0.12	-0.33	0.08	IMMM	-0.04	-0.22	0.14
		Relative Conditional Specific Indirect Effects of Narrative Frame on Sharing Intentions via *Identification with the Protagonist → Counterarguing*					
*X*1-3rd person-Syria	0.01	0.00	0.03	*X*2-3rd person-Syria	0.01	0.00	0.03
*X*1-3rd person-Ukraine	0.02	0.00	0.04	*X*2-3rd person-Ukraine	0.02	0.00	0.04
*X*1-1st person-Syria	0.02	0.00	0.04	*X*2-1st person-Syria	0.01	0.00	0.03
*X*1-1st person-Ukraine	0.01	0.00	0.03	*X*2-1st person-Ukraine	0.02	0.00	0.04
IMMM	-0.01	-0.03	0.00	IMMM	0.00	-0.02	0.01

*Note. X*1 and *X*2 are dummy coded variables with the reference group frame is Profiteer (in *X*1, Profiteer = 0, Victim = 1, Hero = 0; in X2, Profiteer = 0, Victim = 0, Hero = 1). IMMM = Index of Moderated-Moderated Mediation (i.e., difference between conditional indirect effects).

(f) Dependent variable: Feelings Thermometer (Experiment 2)

	Effect	Boot *LLCI*	Boot *ULCI*		Effect	Boot *LLCI*	Boot *ULCI*
			Relative Conditional Specific Indirect Effects of Narrative Frame on Feelings Thermometer via				
			Identification with the Protagonist				
X1-3rd person-Syria	4.65	2.04	7.98	X2-3rd person-Syria	3.54	1.33	6.46
X1-3rd person-Ukraine	5.99	3.16	9.34	X2-3rd person-Ukraine	5.95	3.19	9.20
X1-1st person-Syria	5.60	2.78	9.08	X2-1st person-Syria	4.71	2.32	7.69
X1-1st person-Ukraine	4.40	1.96	7.58	X2-1st person-Ukraine	6.24	3.29	9.90
IMMM	-2.54	-7.19	1.54	IMMM	-0.88	-4.72	2.95
			Relative Conditional Specific Indirect Effects of Narrative Frame on Feelings Thermometer via				
			Identification with the Protagonist → Meaningful Affect				
X1-3rd person-Syria	2.78	0.86	5.18	X2-3rd person-Syria	2.12	0.55	4.17
X1-3rd person-Ukraine	3.59	1.16	6.44	X2-3rd person-Ukraine	3.56	1.15	6.30
X1-1st person-Syria	3.36	1.06	5.95	X2-1st person-Syria	2.82	0.87	5.14
X1-1st person-Ukraine	2.64	0.76	5.02	X2-1st person-Ukraine	3.74	1.24	6.45
IMMM	-1.52	-4.56	0.90	IMMM	-0.53	-3.15	1.68
			Relative Conditional Specific Indirect Effects of Narrative Frame on Feelings Thermometer via				
			Identification with the Protagonist → Cognitive Elaboration				
X1-3rd person-Syria	1.91	0.88	3.25	X2-3rd person-Syria	1.46	0.55	2.62
X1-3rd person-Ukraine	2.46	1.32	3.92	X2-3rd person-Ukraine	2.45	1.35	3.80
X1-1st person-Syria	2.31	1.23	3.65	X2-1st person-Syria	1.94	0.99	3.15
X1-1st person-Ukraine	1.81	0.82	3.09	X2-1st person-Ukraine	2.57	1.41	4.05
IMMM	-1.04	-2.89	0.64	IMMM	-0.36	-1.95	1.20
			Relative Conditional Specific Indirect Effects of Narrative Frame on Feelings Thermometer via				
			Identification with the Protagonist → Counterarguing				
X1-3rd person-Syria	0.20	-0.04	0.53	X2-3rd person-Syria	0.15	-0.03	0.43
X1-3rd person-Ukraine	0.25	-0.06	0.64	X2-3rd person-Ukraine	0.25	-0.06	0.64
X1-1st person-Syria	0.24	-0.05	0.61	X2-1st person-Syria	0.20	-0.05	0.51
X1-1st person-Ukraine	0.18	-0.04	0.49	X2-1st person-Ukraine	0.26	-0.06	0.67
IMMM	-0.11	-0.42	0.08	IMMM	-0.04	-0.26	0.15

Note. X1 and X2 are dummy coded variables with the reference group frame is Profiteer (in X1, Profiteer = 0, Victim = 1, Hero = 0; in X2, Profiteer = 0, Victim = 0, Hero = 1). IMMM = Index of Moderated-Moderated Mediation (i.e., difference between conditional indirect effects).

(g) Dependent variable: Money Allocation (Experiment 2)

	Effect	Boot *LLCI*	Boot *ULCI*		Effect	Boot *LLCI*	Boot *ULCI*
			Relative Conditional Specific Indirect Effects of Narrative Frame on Money Allocation via *Identification with the Protagonist*				
X1-3rd person-Syria	1.36	0.35	2.65	X2-3rd person-Syria	1.04	0.24	2.13
X1-3rd person-Ukraine	1.76	0.50	3.28	X2-3rd person-Ukraine	1.74	0.52	3.17
X1-1st person-Syria	1.64	0.48	3.03	X2-1st person-Syria	1.38	0.39	2.60
X1-1st person-Ukraine	1.29	0.34	2.54	X2-1st person-Ukraine	1.83	0.54	3.38
IMMM	-0.74	-2.29	0.45	IMMM	-0.26	-1.53	0.91
			Relative Conditional Specific Indirect Effects of Narrative Frame on Money Allocation via *Identification with the Protagonist → Meaningful Affect*				
X1-3rd person-Syria	1.03	0.17	2.14	X2-3rd person-Syria	0.78	0.11	1.72
X1-3rd person-Ukraine	1.33	0.25	2.58	X2-3rd person-Ukraine	1.32	0.25	2.58
X1-1st person-Syria	1.24	0.23	2.45	X2-1st person-Syria	1.04	0.19	2.09
X1-1st person-Ukraine	0.98	0.17	2.03	X2-1st person-Ukraine	1.38	0.28	2.64
IMMM	-0.56	-1.79	0.35	IMMM	-0.19	-1.16	0.69
			Relative Conditional Specific Indirect Effects of Narrative Frame on Money Allocation via *Identification with the Protagonist → Cognitive Elaboration*				
X1-3rd person-Syria	1.17	0.56	1.90	X2-3rd person-Syria	0.89	0.35	1.54
X1-3rd person-Ukraine	1.50	0.85	2.29	X2-3rd person-Ukraine	1.49	0.87	2.24
X1-1st person-Syria	1.41	0.78	2.16	X2-1st person-Syria	1.18	0.63	1.83
X1-1st person-Ukraine	1.11	0.53	1.80	X2-1st person-Ukraine	1.57	0.92	2.34
IMMM	-0.64	-1.75	0.38	IMMM	-0.22	-1.19	0.72
			Relative Conditional Specific Indirect Effects of Narrative Frame on Money Allocation via *Identification with the Protagonist → Counterarguing*				
X1-3rd person-Syria	0.20	0.03	0.42	X2-3rd person-Syria	0.15	0.02	0.35
X1-3rd person-Ukraine	0.25	0.05	0.51	X2-3rd person-Ukraine	0.25	0.05	0.50
X1-1st person-Syria	0.24	0.04	0.47	X2-1st person-Syria	0.20	0.04	0.41
X1-1st person-Ukraine	0.19	0.03	0.40	X2-1st person-Ukraine	0.27	0.05	0.54
IMMM	-0.11	-0.34	0.07	IMMM	-0.04	-0.22	0.14

Note. X1 and X2 are dummy coded variables with the reference group frame is Profiteer (in X1, Profiteer = 0, Victim = 1, Hero = 0; in X2, Profiteer = 0, Victim = 0, Hero = 1). IMMM = Index of Moderated-Moderated Mediation (i.e., difference between conditional indirect effects).

(h) Dependent variable: Help Intentions (Experiment 2)

	Effect	Boot *LLCI*	Boot *ULCI*		Effect	Boot *LLCI*	Boot *ULCI*
			Relative Conditional Specific Indirect Effects of Narrative Frame on Help Intentions via				
			Identification with the Protagonist				
*X*1-3rd person-Syria	0.25	0.12	0.41	*X*2-3rd person-Syria	0.19	0.07	0.34
*X*1-3rd person-Ukraine	0.32	0.17	0.50	*X*2-3rd person-Ukraine	0.32	0.17	0.49
*X*1-1st person-Syria	0.30	0.16	0.48	*X*2-1st person-Syria	0.25	0.13	0.40
*X*1-1st person-Ukraine	0.24	0.11	0.40	*X*2-1st person-Ukraine	0.33	0.18	0.52
IMMM	-0.14	-0.39	0.08	IMMM	-0.05	-0.26	0.15
			Relative Conditional Specific Indirect Effects of Narrative Frame on Help Intentions via				
			Identification with the Protagonist → Meaningful Affect				
*X*1-3rd person-Syria	0.12	0.03	0.23	*X*2-3rd person-Syria	0.09	0.02	0.19
*X*1-3rd person-Ukraine	0.16	0.05	0.28	*X*2-3rd person-Ukraine	0.16	0.05	0.28
*X*1-1st person-Syria	0.15	0.05	0.27	*X*2-1st person-Syria	0.13	0.04	0.23
*X*1-1st person-Ukraine	0.12	0.03	0.22	*X*2-1st person-Ukraine	0.17	0.05	0.29
IMMM	-0.07	-0.20	0.04	IMMM	-0.02	-0.14	0.08
			Relative Conditional Specific Indirect Effects of Narrative Frame on Help Intentions via				
			Identification with the Protagonist → Cognitive Elaboration				
*X*1-3rd person-Syria	0.20	0.11	0.31	*X*2-3rd person-Syria	0.16	0.07	0.26
*X*1-3rd person-Ukraine	0.26	0.17	0.37	*X*2-3rd person-Ukraine	0.26	0.17	0.36
*X*1-1st person-Syria	0.25	0.15	0.35	*X*2-1st person-Syria	0.21	0.12	0.30
*X*1-1st person-Ukraine	0.19	0.10	0.30	*X*2-1st person-Ukraine	0.27	0.18	0.38
IMMM	-0.11	-0.30	0.07	IMMM	-0.04	-0.20	0.13
			Relative Conditional Specific Indirect Effects of Narrative Frame on Help Intentions via				
			Identification with the Protagonist → Counterarguing				
*X*1-3rd person-Syria	-0.01	-0.02	0.01	*X*2-3rd person-Syria	-0.01	-0.02	0.00
*X*1-3rd person-Ukraine	-0.01	-0.03	0.01	*X*2-3rd person-Ukraine	-0.01	-0.03	0.01
*X*1-1st person-Syria	-0.01	-0.03	0.01	*X*2-1st person-Syria	-0.01	-0.02	0.01
*X*1-1st person-Ukraine	-0.01	-0.02	0.01	*X*2-1st person-Ukraine	-0.01	-0.03	0.01
IMMM	0.00	-0.01	0.02	IMMM	0.00	-0.01	0.01

*Note. X*1 and *X*2 are dummy coded variables with the reference group frame is Profiteer (in *X*1, Profiteer = 0, Victim = 1, Hero = 0; in X2, Profiteer = 0, Victim = 0, Hero = 1). IMMM = Index of Moderated-Moderated Mediation (i.e., difference between conditional indirect effects).