

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

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**Abstract**

While narratives play a ubiquitous role in human life, there has been a recent surge in theoretical and empirical attention dedicated to understanding their impact on varied psychological outcomes. Despite previous attempts to explore the devices that influence narrative effectiveness (e.g., framing, the group cue or narrative voice) and the mechanisms they operate through (e.g., identification or emotional processes), there remains a gap in systematic and simultaneous tests in large samples. In this study, we focus on testimonial narrative messages, employing a pre-registered online experiment in Spain ( $N = 1502$ ) and replicating it in Hungary ( $N = 960$ ), examining the impact of narrative frames (immigrant as a profiteer vs victim vs hero), immigrant origin stigma (high vs low), and narrative voice (first- vs third-person) on participants' attitudes and helping intentions towards immigrants. Framing a testimonial in terms of victimization or heroism (compared to profiteering), improved recipients' attitudes and helping intentions towards immigrants, and produced ripple effects. These effects manifested, primarily, through heightened psychological identification with the protagonist, resulting in increased meaningful affect and cognitive elaboration, alongside decreased counterarguing. These findings offer insights into the dynamics of narrative persuasion models and underscore the significance of testimonial messages in addressing social issues.

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

## Introduction

Human life is often characterized by our capacity for narrative creation and immersion, encapsulated by the term *Homo Narrans* (Fisher, 1985). Narratives, defined as causally connected events involving characters from which lessons can be derived (Hoeken et al., 2016), are ubiquitous across cultures through various mediums. Beyond entertainment, narratives play a crucial role in transmitting cultural information, fostering psychological skills (e.g., Mar et al., 2009), and shaping intergroup relations (e.g., Park, 2012).

Narratives serve as tools for knowledge, belief, and attitude transmission at the family-intergenerational level (Pratt et al., 2008) and at the social level (Rimé, 2009). They contribute to the development of critical social skills such as Theory of Mind (Guajardo & Watson, 2002; Kidd & Castano, 2013), vital for understanding others' mental states. Moreover, narratives, especially those depicting stigmatized outgroup members, have proven effective in promoting intergroup relations, as described in intergroup contact theory (see Pettigrew & Tropp, 2006). Indeed, reading narratives about immigrants or refugees reduce threat perceptions, and foster positive attitudes towards immigrants (Igartua & Cachón-Ramón, 2023; Wojcieszak et al., 2020); therefore, they can be taken 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 the different impacts and the conditions narrative messages act from. In more detail, we center in the context of work-related immigration and evaluate how testimonial messages can affect individuals' cognitions and emotions, as well as intergroup attitudes and behavioral intentions.

### **Testimonial Narratives: A Transformative Experience**

Research on narrative persuasion has gained attention recently, exploring how narratives, compared to other non-narrative formats, uniquely influence psychological processes (Busselle & Bilandzic, 2012; Dal Cin et al., 2004; Green et al., 2019; Green & Brock, 2000). Narratives are increasingly used as persuasive tools in health improvement (Green, 2006; Kim et al., 2020; Watts et al., 2023), prejudice reduction (Banas et al., 2020; Igartua et al., 2023; Igartua & Guerrero-Martín, 2022; Zhuang & Guidry, 2022), and even scientific knowledge transmission (Dahlstrom, 2014). This study focuses on testimonial narratives, characterized by presenting a before-and-after sequence of events in a protagonist's life (Igartua & Cachón-Ramón, 2023; Igartua & Guerrero-Martín, 2022). Compared to other formats, testimonial narratives are advantageous for their simplicity, centering on the person and proving effective even with low audience involvement (Braverman, 2008; de Wit et al., 2008). They are also cost-effective, given the brevity for production and dissemination, suitable for platforms like online content and social networks.

Recent studies demonstrate the effectiveness of testimonial narratives in improving attitudes toward stigmatized immigrants (Igartua & Cachón-Ramón, 2023) 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). Testimonial messages act as *narrative pills* (e.g., Igartua & Guerrero-Martín, 2022), effectively bringing about positive changes in domains such as health behaviors and intergroup relations, among others (Braddock & Dillard, 2016; Zhuang & Guidry, 2022).

In the realm of applied research, understanding the attributes of testimonial narrative devices, such as the narrative frame or protagonist characteristics, is crucial for

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explaining persuasion (Tukachinsky, 2014). The manipulation of these devices triggers dynamic psychological effects, where parallel mechanisms interact, influencing persuasive power (e.g., Wojcieszak et al., 2020). In addition, this narrative format challenges theoretical models of narrative persuasion, employing an over approach compared to entertaining narratives (Watts et al., 2023; also, see below).

Therefore, it is essential not only to recognize the potential effects of testimonial narratives (e.g., Braddock & Dillard, 2016), but also to understand how and when they operate and produce these effects, considering their boundary conditions (Green, 2021).

### *Narrative Devices: Frame, Narrative Voice and Group Cue*

The factors influencing the effectiveness of testimonial narratives, such as framing and narrative voice, interact in complex ways due to their dynamic relationships. While previous research has focused on their importance to persuasion (e.g., Chen & Bell, 2022), there has been a tendency to manipulate them in isolation, and thus, their dynamic relations are not fully understood in their complexity.

To begin with, testimonial topics vary significantly (e.g., de Wit et al., 2008; Schemer & Meltzer, 2020) and can be framed in different forms, depending on 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. By selecting the words emphasized or the focus the narrative is leading to, a testimonial can produce particular effects in recipients' emotions (e.g., Lecheler et al., 2015), and cognitions as well (Wojcieszak et al., 2020). This is evident among immigration-related frames (e.g., reading a testimony about an immigrant or refugee), which can be considered an application of mediated forms of intergroup contact (Schemer & Meltzer, 2020).

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Other testimonial elements, such as information about the protagonist and the narrative voice, contribute to persuasion. Abundant evidence shows that first-person narratives increase persuasion when recipients process health-related narratives (Chen & Bell, 2022). This effect can be explained, at least in part, due to our tendency to empathetically engage and connect with characters (Eekhof et al., 2022), even when our individual dispositions (e.g., trait agreeableness or openness) are ruled out (Mar et al., 2009). However, the full explanation of this effect among intergroup relations remains incomplete, and the contrast of different narrative voices can yield unexpected results (Zhuang & Guidry, 2022).

Finally, more peripheral cues –as the protagonist's country of origin– also influence persuasion. As Brader and colleagues' (2008) showed, the frame of a piece of news can produce greater rejection when the group cue involved a more distant immigrant. In fact, this effect is aligned with appraisal-based group-level emotional theories (Mackie et al., 2000; Smith & Mackie, 2016), that explain the importance of evaluation outgroup members in terms of their relevance for the ingroup. However, more recent attempts have failed to replicate Brader and colleagues' effects and the relationship between this cue and testimonial evaluations proves more complex than originally posited (Igartua et al., 2008; Igartua & Cheng, 2009).

While considerable efforts have explored the effects of these factors on narrative and testimonial effectiveness, no study to date has examined their interactive joint effects on recipients. This isolated approach enhances experimental control but diminishes generalization power, leaving a gap in understanding a (very likely) cascade of effects resulting from the interaction of framing, narrative voice, and group cue. Further exploration is needed to unravel the intricate dynamics among these factors in shaping attitudes in the context of persuasive narratives.

***Mechanisms Involved: Identification, Emotional Reactions and Cognitive Processes***

Various psychological mechanisms underlie the effectiveness of narratives in persuasion, focusing on identification, emotional reactions, and cognitive processes within several models and theories.

The transportation-imagery model by Green and Brocks' (2002) highlights narrative transportation, integrating mental imagery, emotional reactions, and detachment from real-world information (Green & Brock, 2000; see also Van Laer et al., 2014). Transportation, or absorption in Slater and Rouner's (2002) terms in the extended elaboration likelihood model, is mediated by the identification with relevant characters, significantly enhancing the persuasiveness of testimonials (Cohen, 2001; Igartua et al., 2017; Igartua & Rodríguez-Contreras, 2020). Identification is crucial, as it is proposed as the leading mechanisms behind opposition to the message (Moyer-Gusé & Nabi, 2010).

Certain models, such as Slater and Rouner's (2002), designed with entertainment as a fundamental goal, may be counterproductive for testimonial narratives, where overt persuasion attempts are prevalent (Watts et al., 2023). Unlike models emphasizing emotional mechanisms, we consider identification with the protagonist as the primordial mechanisms in testimonials due to its role in increasing absorption and concentration (Ratcliff & Sun, 2020), while potentially leading recipients to stronger psychological reactions and self-transcendence (Moyer-Gusé & Wilson, 2023).

Besides identification, testimonial narratives undoubtedly evoke emotional reactions, influencing information processing and persuasion. Positive emotions, like awe, or negative emotions, such as sadness, have distinctive effects on persuasion (Griskevicius et al., 2010; Yoo et al., 2014). Together with identification with the protagonist, emotional reactions can act as serial mediators of the effects of narratives on attitudes and beliefs (Nabi & Green, 2015; Watts et al., 2023).

A third group of psychological mechanisms involves cognitive processes. Receiving testimonial narratives (e.g., reading one) necessitates cognitive deployment and investment, initiating cognitive elaboration and counterarguing processes. A particular message and its characteristics can either increase (through greater reflection) or decrease (through greater counterarguing) persuasion among its recipients (Green, 2006; Igartua & Cachón-Ramón, 2023; Igartua & Guerrero-Martín, 2022; Moyer-Gusé & Nabi, 2010; Slater & Rouner, 2002).

Cognitive mechanisms, like cognitive elaboration and counterarguing, seem to depend on additional psychological reactions, such as identification with the character of the narrative, as Igartua (2010) posits. However, research evaluating the impact of different mediators simultaneously is scarce (Oschatz & Marker, 2020), and the study of narrative persuasion is marked by a focus on effectiveness rather than a systematic review of mechanisms in some meta-analyses (e.g., Shen et al., 2015). It remains crucial to study the complex relationships among variables that bring about changes in recipients of testimonial narratives (Green, 2021).

### **Objective and Hypotheses**

Our preregistered study tests a large-scale model examining the persuasive effects of immigration-related testimonies on readers' attitudes and behavioral intentions in Spain (Study 1) and Hungary (Study 2).<sup>1</sup> Focusing on work-related immigration, we explore three frames: the protagonist as a *profiteer* of welfare, *victim* of exploitation, or *hero* overcoming circumstances. Additionally, we assess how narrative voice (1st vs. 3rd person) and the group cue of the protagonist (e.g., from Morocco or Ecuador in Study 1, Syria or Ukraine in Study 2) moderate the effects on identification, emotional, and

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<sup>1</sup> Full pre-registration (i.e., theoretical rationale, sample size, hypotheses and statistical analyses, and selection criteria) is available on: <https://osf.io/8j5ab>



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cognitive responses. This study represents the first comprehensive examination of narrative testimonial devices and their conditional mechanisms.

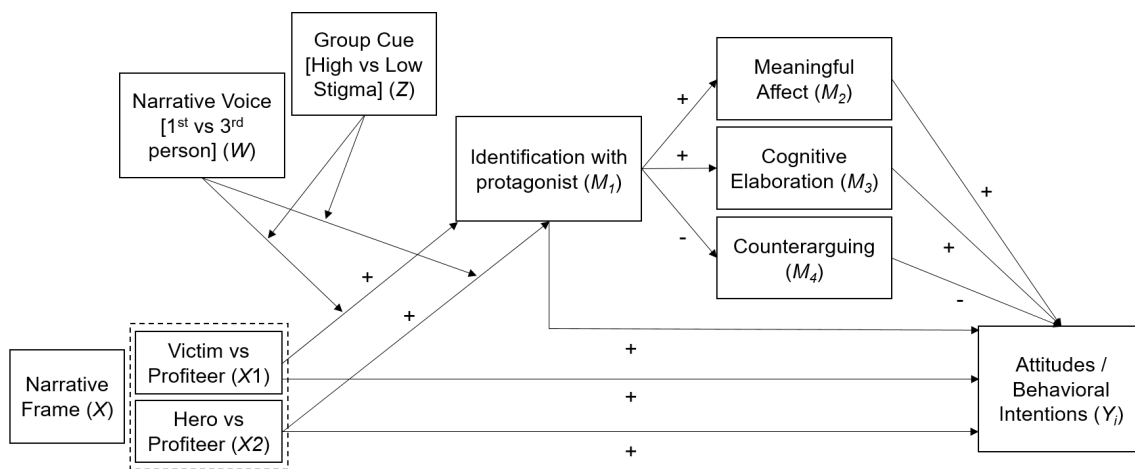
Our predictions, as per preregistration, are as follows: Frames portraying an immigrant as a victim and a hero (vs. a profiteer) will enhance identification with the protagonist (H1.1 and H1.2) (Igartua & Cheng, 2009) and lead to more positive attitudes and helping intentions towards immigrants (H2.1 and H2.2).

We also anticipate conditional indirect effects of the narrative frames. Considering the full model (Figure 1), we expect that the effects of the frames (i.e., on attitudes and helping intentions) will be mediated by identification (first), and meaningful affect, cognitive elaboration, and counterarguing (subsequently). In specific, we expect identification with the protagonist (higher in victim and hero conditions; H3.1) to mediate the effects of frames on attitudes and helping intentions towards immigrants. We further expect increased identification to enhance meaningful affect (H3.2) and cognitive elaboration (H3.3), while decreasing counterarguing (H3.4) (see Nabi & Green, 2015; see also Igartua & Guerrero-Martín, 2022).

Finally, we hypothesize that the described effects will be conditioned by two moderators (group cue and narrative voice), consistent with previous research (Chen & Bell, 2022; Igartua & Guerrero-Martín, 2022). Specifically, we expect that, compared to the profiteer framing condition, the victim and hero frames will increase identification more strongly when the story is in 1st person and depicts a less stigmatized immigrant. We propose a three-way interaction between frames, narrative voice, and group cue affecting subsequent serial mediation and effects on dependent variables (H4) (see Igartua et al., 2019).

**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 Spanish 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) 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

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average to be completed. The experimental manipulation involved the presentation of differential elements of the narratives, 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: 1<sup>st</sup> person or 3<sup>rd</sup> person) between-subject factorial design. In this way, each participant was randomly assigned to one of 12 experimental conditions, depending on the particular testimony.

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. To see the pilot study, together with the testimonials and all the materials used for each condition (i.e., data, syntax, surveys and supplemental analyses), see our Supplemental Online Materials (SOM) at: <https://osf.io/pn94w/>).

### *Measures*

The order of the instruments in regard to the experimental manipulation were the following: items measuring demographics, Modern Racism, Ten-Item Personality Inventory and Intergroup Contact (available in SOM) 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, we used 6 items on a Likert scale

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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 [Saïd/Edison's] place*), using a 1 (Not at all) to 5 (A lot) Likert scale. Reliability was  $\alpha = .94$  ( $M = 2.97$ ;  $SD = 0.95$ ).

*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  $\alpha = .95$  ( $M = 4.06$ ;  $SD = 1.68$ ),  $.91$  ( $M = 3.31$ ;  $SD = 1.62$ ), 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  $\alpha = .88$  ( $M = 3.82$ ;  $SD = 1.42$ ).

*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 [Saïd/Edison]'s account was inaccurate*,

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*misleading, or exaggerated*), on a Likert scale from 1 (Totally disagree) to 7 (Totally agree). Reliability was  $\alpha = .74$  ( $M = 3.82$ ;  $SD = 1.42$ ).

*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, 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) Likert scale. Reliability was  $\alpha = .91$ . ( $M = 3.66$ ;  $SD = 1.60$ ).

## **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 then set up a conditional serial and parallel mediation customized model (see the SPSS syntax in SOM) to test the

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hypotheses and conducted the analyses using 95% percentile bootstrap confident intervals with 10,000 samples, to a more robust test of the statistical inference of the specific relative conditional indirect effects. Through this model, we were able to test simultaneously the direct and indirect effects of the narrative frames and evaluate the specific relative conditional indirect effects. This is because the independent variable was multicategorical and, additionally, its indirect effects on the proposed mediators were conditioned by the moderators of the model. For all hypotheses presented here (i.e. main effects, interaction effects, and indirect effects), models will be run with and without co-variables (for a discussion on the benefits of this approach, see Darlington & Hayes, 2017) (see SOM).

## Results

### *Manipulation Checks*

Across the 12 conditions, analyses showed no significant differences between groups in relation to gender ( $\chi^2(22, N = 1502) = 20.37, p = .560$ ), educational level ( $\chi^2(44, N = 1502) = 49.10, p = .276$ ), or employment status ( $\chi^2(44, N = 1502) = 39.52, p = .664$ ). Furthermore, there are no differences in participants' age ( $F(11, 1490) = 0.44, p = .935, \eta^2 = .003$ ) and self-reported political identity ( $F(11, 1490) = 5.57, p = .632, \eta^2 = .006$ ).

When comparing the experimental conditions as a function of the frame (i.e., 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 (see SOM for details).

Finally, we checked the correct recalling of the protagonist's name, origin and the narrative voice used in the testimony. Chi-squared tests revealed significant associations between participants' recalling of the protagonist's name ( $\chi^2(5, N = 1502) = 1313.71, p <$

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.001), origin ( $\chi^2(5, N = 1502) = 1323.15, p < .001$ ) and the narrative voice used ( $\chi^2(1, N = 1502) = 1124.05, p < .001$ ) with the group cue (i.e., for his name and origin), and narrative voice, respectively. Additionally, there were no significant differences across the 12 conditions when recalling the protagonist's age ( $\chi^2(55, N = 1502) = 61.13, p = .265$ ). Taking these results together, we conclude that the experimental manipulation was successful in terms of their original purpose and the understanding among participants.

**Table 1**

*Conditional Indirect Effects of Narrative Frame on Feeling Thermometer (Experiment 1).*

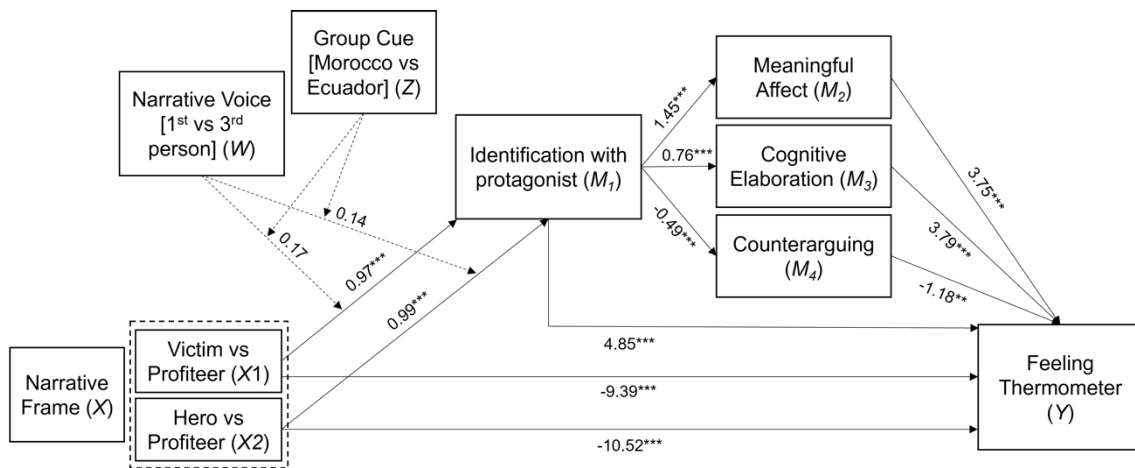
Indirect Effects via	X1: Victim vs Profiteer frame				X2: Hero vs Profiteer frame			
	Effect	Boot SE	Boot 95% CI		Effect	Boot SE	Boot 95% CI	
			LL	UL			LL	UL
<i>Identification with the Protagonist → Feeling Thermometer</i>								
3 <sup>rd</sup> person-Morocco	4.89	1.23	2.67	7.42	5.05	1.26	2.77	7.63
3 <sup>rd</sup> person-Ecuador	4.60	1.12	2.57	6.85	4.84	1.17	2.66	7.19
1 <sup>st</sup> person-Morocco	4.36	1.12	2.31	6.69	4.45	1.15	2.33	6.84
1 <sup>st</sup> person-Ecuador	4.89	1.20	2.68	7.37	4.92	1.21	2.66	7.41
IMMM	0.82	1.12	-1.26	3.15	0.69	1.10	-1.39	3.06
<i>Identification with the Protagonist → Meaningful Affect → Feeling Thermometer</i>								
3 <sup>rd</sup> person-Morocco	5.46	1.14	3.36	7.80	5.63	1.12	3.58	7.96
3 <sup>rd</sup> person-Ecuador	5.13	1.05	3.17	7.28	5.39	1.07	3.38	7.61
1 <sup>st</sup> person-Morocco	4.86	1.06	2.91	7.10	4.96	1.09	2.97	7.24
1 <sup>st</sup> person-Ecuador	5.45	1.10	3.41	7.70	5.49	1.06	3.47	7.64
IMMM	0.92	1.23	-1.43	3.41	0.77	1.19	-1.61	3.19
<i>Identification with the Protagonist → Cognitive Elaboration → Feeling Thermometer</i>								
3 <sup>rd</sup> person-Morocco	2.89	0.57	1.87	4.11	2.98	0.56	1.96	4.15
3 <sup>rd</sup> person-Ecuador	2.72	0.53	1.78	3.82	2.85	0.53	1.91	3.97
1 <sup>st</sup> person-Morocco	2.57	0.52	1.65	3.68	2.62	0.52	1.69	3.72
1 <sup>st</sup> person-Ecuador	2.88	0.53	1.92	3.98	2.90	0.54	1.90	4.03
IMMM	0.49	0.65	-0.76	1.81	0.41	0.64	-0.83	1.76
<i>Identification with the Protagonist → Counterarguing → Feeling Thermometer</i>								
3 <sup>rd</sup> person-Morocco	0.58	0.22	0.18	1.05	0.60	0.23	0.19	1.08
3 <sup>rd</sup> person-Ecuador	0.55	0.21	0.16	0.99	0.58	0.22	0.18	1.03
1 <sup>st</sup> person-Morocco	0.52	0.21	0.16	0.96	0.53	0.20	0.16	0.96
1 <sup>st</sup> person-Ecuador	0.58	0.22	0.18	1.04	0.59	0.22	0.18	1.05
IMMM	0.10	0.14	-0.17	0.39	0.08	0.14	-0.18	0.38

*Note.* Analyses were conducted with bootstrapping-based inference using 10,000 samples for Standard Errors (SE) and Confident Intervals (CI). Lower Limit (LL) and Upper Limit

(UP). IMMM = Index of Moderated-Moderated Mediation. Full paths can be seen in SOM.

**Figure 2**

*Full Conditional Indirect effects of Narrative Frame on Feeling Thermometer (Experiment 1).*



*Note.* The frame had indirect effects on Feeling Thermometer via Identification with the protagonist ( $B = 0.28$  and  $0.29$ ); and subsequently, via: Meaningful affect ( $B = 0.47$  and  $0.48$ ), Cognitive elaboration ( $B = 0.33$  and  $0.34$ ), and Counterarguing ( $B = 0.04$  and  $0.04$ ). Dotted lines indicate non-significant relations (i.e.,  $p > .05$ ). \*, \*\*, and \*\*\*, indicate  $p$  values of  $<.05$ ,  $<.01$ , and  $<.001$ , respectively.

**Conditional Indirect Effects of Narrative Frames on Dependent Variables**

When analyzing the full models (see 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  $< .001$ ). They also reported 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.



**Table 2**

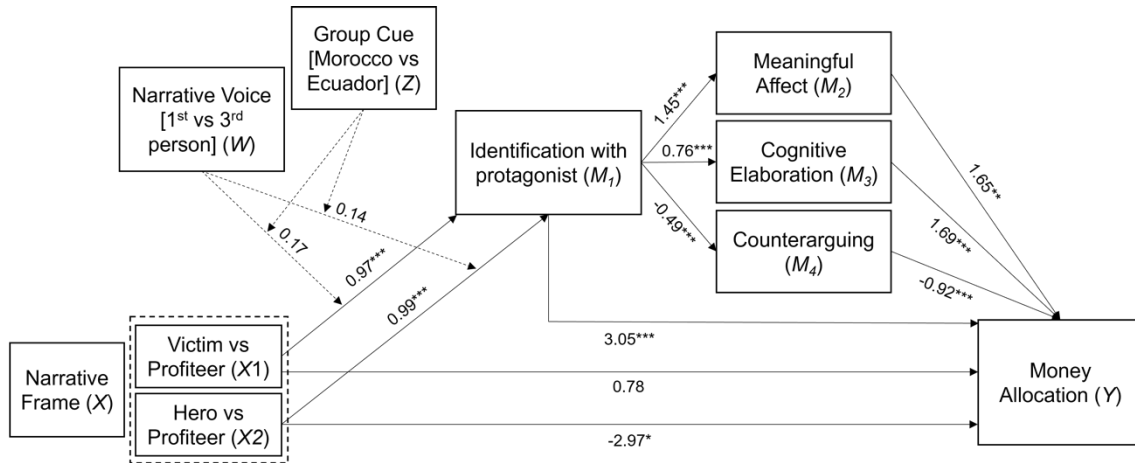
*Conditional Indirect Effects of Narrative Frame on Money Allocation (Experiment 1).*

Indirect Effects via	X1: Victim vs Profiteer frame				X2: Hero vs Profiteer frame			
	Effect	Boot SE	Boot 95% CI		Effect	Boot SE	Boot 95% CI	
			LL	UL			LL	UL
<i>Identification with the Protagonist → Money Allocation</i>								
3 <sup>rd</sup> person-Morocco	3.07	0.92	1.33	4.97	3.17	0.94	1.37	5.09
3 <sup>rd</sup> person-Ecuador	2.89	0.87	1.26	4.68	3.04	0.90	1.33	4.87
1 <sup>st</sup> person-Morocco	2.74	0.81	1.19	4.37	2.79	0.84	1.21	4.52
1 <sup>st</sup> person-Ecuador	3.07	0.90	1.34	4.92	3.09	0.91	1.37	4.94
IMMM	0.52	0.72	-0.81	2.05	0.44	0.70	-0.88	2.00
<i>Identification with the Protagonist → Meaningful Affect → Money Allocation</i>								
3 <sup>rd</sup> person-Morocco	2.40	0.79	0.92	4.03	2.48	0.80	0.98	4.11
3 <sup>rd</sup> person-Ecuador	2.26	0.73	0.88	3.75	2.37	0.75	0.95	3.90
1 <sup>st</sup> person-Morocco	2.13	0.72	0.81	3.66	2.18	0.73	0.83	3.69
1 <sup>st</sup> person-Ecuador	2.40	0.77	0.93	3.98	2.41	0.77	0.96	4.00
IMMM	0.40	0.56	-0.65	1.63	0.34	0.55	-0.69	1.53
<i>Identification with the Protagonist → Cognitive Elaboration → Money Allocation</i>								
3 <sup>rd</sup> person-Morocco	1.28	0.34	0.65	2.00	1.32	0.35	0.68	2.04
3 <sup>rd</sup> person-Ecuador	1.21	0.32	0.61	1.89	1.27	0.33	0.65	1.96
1 <sup>st</sup> person-Morocco	1.14	0.32	0.56	1.83	1.17	0.32	0.58	1.83
1 <sup>st</sup> person-Ecuador	1.28	0.34	0.65	1.97	1.29	0.34	0.66	1.99
IMMM	0.22	0.29	-0.34	0.82	0.18	0.29	-0.36	0.79
<i>Identification with the Protagonist → Counterarguing → Money Allocation</i>								
3 <sup>rd</sup> person-Morocco	0.45	0.18	0.13	0.81	0.47	0.18	0.13	0.85
3 <sup>rd</sup> person-Ecuador	0.43	0.17	0.12	0.77	0.45	0.17	0.12	0.81
1 <sup>st</sup> person-Morocco	0.40	0.16	0.11	0.75	0.41	0.17	0.11	0.76
1 <sup>st</sup> person-Ecuador	0.45	0.18	0.13	0.82	0.46	0.18	0.13	0.83
IMMM	0.08	0.11	-0.13	0.31	0.06	0.11	-0.14	0.31

*Note.* Analyses were conducted with bootstrapping-based inference using 10,000 samples for Standard Errors (SE) and Confident Intervals (CI). Lower Limit (LL) and Upper Limit (UL). IMMM = Index of Moderated-Moderated Mediation. Full paths can be seen in SOM.

**Figure 3**

*Full Conditional Indirect effects of Narrative Frame on Money Allocation (Experiment 1).*



*Note.* The frame had indirect effects on Money Allocation via Identification with the protagonist ( $B = 3.07$  and  $3.17$ ); and subsequently, via: Meaningful affect ( $B = 0.79$  and  $0.80$ ), Cognitive elaboration ( $B = 1.28$  and  $1.33$ ), and Counterarguing ( $B = 0.45$  and  $0.47$ ). Dotted lines indicate non-significant relations (i.e.,  $p > .05$ ). \*, \*\*, and \*\*\*, indicate  $p$  values of  $<.05$ ,  $<.01$ , and  $<.001$ , respectively.

When analyzing the paths of the effects, we observe significant effects via all the proposed mediators (Table 1-3; Figures 2-4). After an increased identification with the protagonist due to reading the victim and hero testimonies (compared to profiteer), 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 a NGO. In all, these results strongly support Hypotheses H3.1, H3.2, H3.3 and to a lesser extent, H3.4.

**Table 3**

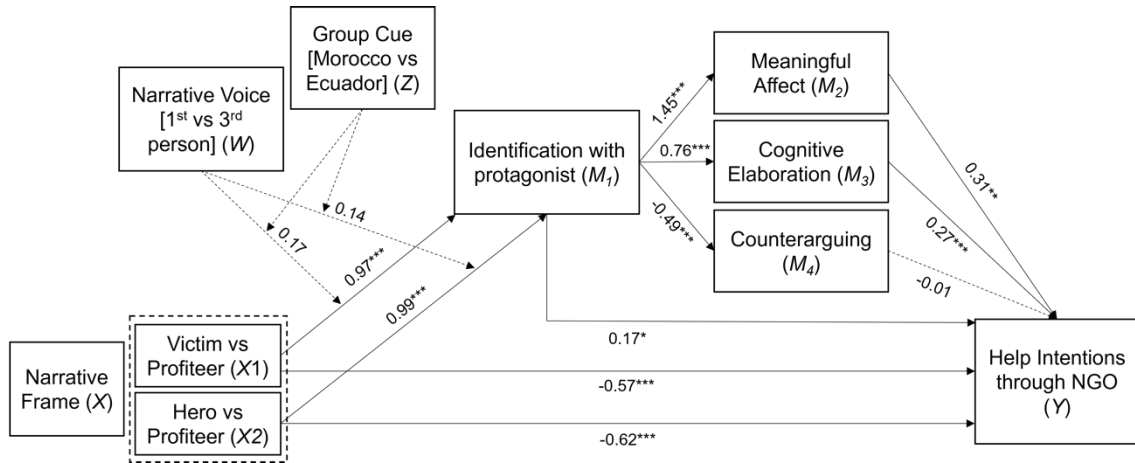
*Conditional Indirect Effects of Narrative Frame on Helping Intentions (Experiment 1).*

Indirect Effects via	X1: Victim vs Profiteer frame				X2: Hero vs Profiteer frame			
	Effect	Boot SE	Boot 95% CI		Effect	Boot SE	Boot 95% CI	
			LL	UL			LL	UL
<i>Identification with the Protagonist → Help Intentions</i>								
3 <sup>rd</sup> person-Morocco	0.17	0.08	0.02	0.33	0.17	0.08	0.02	0.34
3 <sup>rd</sup> person-Ecuador	0.16	0.07	0.02	0.31	0.17	0.08	0.02	0.32
1 <sup>st</sup> person-Morocco	0.15	0.07	0.02	0.29	0.15	0.07	0.02	0.30
1 <sup>st</sup> person-Ecuador	0.17	0.08	0.02	0.33	0.17	0.08	0.02	0.33
IMMM	0.03	0.04	-0.05	0.12	0.02	0.04	-0.05	0.12
<i>Identification with the Protagonist → Meaningful Affect → Help Intentions</i>								
3 <sup>rd</sup> person-Morocco	0.45	0.08	0.30	0.63	0.47	0.08	0.32	0.64
3 <sup>rd</sup> person-Ecuador	0.43	0.07	0.30	0.57	0.45	0.08	0.31	0.60
1 <sup>st</sup> person-Morocco	0.40	0.08	0.27	0.56	0.41	0.08	0.27	0.57
1 <sup>st</sup> person-Ecuador	0.45	0.08	0.31	0.61	0.46	0.08	0.32	0.61
IMMM	0.08	0.10	-0.12	0.28	0.06	0.10	-0.13	0.27
<i>Identification with the Protagonist → Cognitive Elaboration → Help Intentions</i>								
3 <sup>rd</sup> person-Morocco	0.21	0.04	0.14	0.29	0.21	0.04	0.15	0.29
3 <sup>rd</sup> person-Ecuador	0.20	0.04	0.13	0.27	0.20	0.04	0.14	0.28
1 <sup>st</sup> person-Morocco	0.18	0.04	0.12	0.26	0.19	0.04	0.12	0.26
1 <sup>st</sup> person-Ecuador	0.21	0.04	0.14	0.28	0.21	0.04	0.14	0.28
IMMM	0.03	0.05	-0.05	0.13	0.03	0.05	-0.06	0.12
<i>Identification with the Protagonist → Counterarguing → Help Intentions</i>								
3 <sup>rd</sup> person-Morocco	0.01	0.02	-0.02	0.04	0.01	0.02	-0.03	0.04
3 <sup>rd</sup> person-Ecuador	0.01	0.01	-0.02	0.04	0.01	0.02	-0.02	0.04
1 <sup>st</sup> person-Morocco	0.01	0.01	-0.02	0.03	0.01	0.01	-0.02	0.03
1 <sup>st</sup> person-Ecuador	0.01	0.02	-0.02	0.04	0.01	0.02	-0.02	0.04
IMMM	0.00	0.00	-0.01	0.01	0.00	0.00	-0.01	0.01

*Note.* Analyses were conducted with bootstrapping-based inference using 10,000 samples for Standard Errors (SE) and Confident Intervals (CI). Lower Limit (LL) and Upper Limit (UL). IMMM = Index of Moderated-Moderated Mediation. Full paths can be seen in SOM.

**Figure 4**

*Full Conditional Indirect effects of Narrative Frame on Helping Intentions (Experiment 1).*



*Note.* The frame had indirect effects on Help Intentions via Identification with the protagonist ( $B = 0.17$  and  $0.16$ ); and subsequently, via: Meaningful affect ( $B = 0.46$  and  $0.47$ ), and Cognitive elaboration ( $B = 0.21$  and  $0.21$ ). Dotted lines indicate non-significant relations (i.e.,  $p > .05$ ). \*, \*\*, and \*\*\*, indicate  $p$  values of  $<.05$ ,  $<.01$ , and  $<.001$ , respectively.

Finally, we can also see that the indexes of moderated-moderated mediation (i.e., IMMM) were non-significant indicating that the narrative voice and the group cue did not condition the indirect effects of the narrative frame on the dependent variables. Therefore, we did not find support for Hypothesis H4.

**Discussion**

In this preregistered study, we observed distinct psychological effects of narrative frames on testimonials related to work-related immigration. The study validated that framing significantly influences psychological identification with the protagonist, attitudinal evaluations, and prosocial behavior towards a broader group of immigrants (e.g., Igartua & Cheng, 2009). Additionally, we showed how these frames initiate a cascade of psychological reactions and yet, different narrative voices (1st vs. 3rd person) or group cues (Morocco vs. Ecuador) did not alter these effects.

## Testimonial Narratives' Impact

Readers engaging with testimonials framed as victimhood or heroism, compared to profiteering, demonstrated heightened identification with the protagonist. This aligns with literature suggesting two distinct routes favoring affiliative processes and prosocial tendencies: empathetic responses and responses to moral excellence and prestige (Batson, 1991; Algoe & Haidt, 2009). Increased identification motivated participants to engage in deeper cognitive reflection, forming varied impressions about the testimony, including (decreased) counter-argumentation (e.g., Slater & Rouner, 2002). Simultaneously, readers felt meaningful affect (Rieger et al., 2018) such as *moral elevation* or *admiration* (Stellar et al., 2017) congruent with the testimonials (Nabi & Green, 2015). While a serial relationship between affective responses and counter-argumentation is possible (see Watts et al., 2023), our findings support a parallel relationship (e.g., Igartua, González-Vázquez, et al., 2023). In an applied sense, this is because counterarguing cannot always depend on an emotional reaction; in fact, a testimonial could trigger defensive mechanisms (e.g., counterarguing) before reaching its emotional climax.

Unexpectedly, we did not find the anticipated effects of narrative voice and group cue. Previous studies suggesting the first person increases identification with the protagonist (for a meta-analysis on health messaging, see Chen & Bell, 2022) and the narrative voice interacts with similarity (see the meta-analysis of Huang et al., 2023) were not validated in our experiment. Furthermore, there was no interaction between framing, similarity (via group cue), and narrative voice; surprisingly, considering that the relation between similarity and increased identification has been largely theorized (Tajfel & Turner, 1979; Turner et al., 1987) and demonstrated (e.g., Igartua & Guerrero-Martín, 2022). As Christy (2018) posits, this discrepancy prompts further investigation, especially in the context of intergroup relations, where expected effects have been established in previous studies.

In conclusion, robust support was found for most anticipated relationships in a large and diverse Spanish sample. However, questions remain regarding the stability and generalizability of these effects across different socio-cultural contexts. Exploring potential joint effects of narrative voice and perceived similarity (group cue) on identification with the protagonist, as demonstrated in prior research (Kim et al., 2020), is another avenue for further inquiry. To enhance the generality of these results and address these research questions, we conducted a replication of this experiment with participants from Hungary.

### **Experiment 2: A Replication**

#### **Method**

##### ***Participants and Procedure***

The Hungarian study was an exact replication of Experiment 1 concerning procedure, materials and analyses. 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) and were recruited through *Qualtrics* (participants and their parents were 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.

All of them completed this online experiment with an average length of 16.08 minutes ( $SD = 7.72$  minutes). The only difference here was that, compared to Experiment 1, the group cue manipulation included different countries of origin for the protagonist to

## Testimonial Narratives' Impact

match the cultural reality. Therefore, we used for this variable stories with a protagonist either from Syria (i.e., more culturally distant) or from Ukraine (i.e., less culturally distant). Finally, 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. After reading the testimonies, participants answered the following scales: *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. Additionally, *Identification with the protagonist* (Igartua et al., 2019; Igartua & Cachón-Ramón, 2023; Igartua & Guerrero-Martín, 2022;  $\alpha = .94$ ;  $M = 2.83$ ;  $SD = 0.91$ ); *emotional reactions* (Oliver et al., 2012; Fredrickson, 2009) used to evaluate meaningful ( $\alpha = .96$ ;  $M = 3.74$ ;  $SD = 1.79$ ), positive ( $\alpha = .93$ ;  $M = 2.87$ ;  $SD = 1.61$ ), and negative affect ( $\alpha = .86$ ;  $M = 3.40$ ;  $SD = 1.43$ ); *cognitive elaboration* (Igartua, 2010; Igartua & Guerrero-Martín, 2022; Moyer-Gusé & Nabi, 2010;  $\alpha = .87$ ;  $M = 3.84$ ;  $SD = 1.52$ ); *counterarguing* (Igartua & Cachón-Ramón, 2023;  $\alpha = .81$ ;  $M = 3.60$ ;  $SD = 1.50$ ); *feeling thermometer* (Wojcieszak et al., 2020;  $r = .73$ ,  $p < .001$ ;  $M = 38.43$ ;  $SD = 26.38$ ); *money allocation task* (Ad-hoc) ( $M = 9.07$ ,  $SD = 13.76$ ); and, finally, *help intentions* (Igartua & Guerrero-Martín, 2022;  $\alpha = .88$ ;  $M = 2.80$ ;  $SD = 1.48$ ) (see SOM).

### **Data Analyses**

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

## Results

### *Manipulation Checks*

As in Experiment 1, analyses showed no significant differences regarding gender ( $\chi^2(22, N = 960) = 14.37, p = .888$ ), educational level ( $\chi^2(44, N = 960) = 32.59, p = .897$ ), or employment status ( $\chi^2(44, N = 960) = 40.58, p = .619$ ). Furthermore, there are no differences in participants' age ( $F(11, 948) = 1.15, p = .322, \eta^2 = .013$ ) and self-reported political identity ( $F(11, 948) = 0.90, p = .536, \eta^2 = .010$ ). Then, the analysis of the manipulation concerning the content revealed differences across conditions in the analysis of threat ( $F(2, 257) = 437.19, p < .001, \eta^2 = .477$ ), victimization ( $F(2, 257) = 207.34, p < .001, \eta^2 = .302$ ), and heroism ( $F(2, 257) = 315.57, p < .001, \eta^2 = .397$ ), being all differences in the expected directions. Finally, further analyses revealed significant associations (i.e., correct recalling) between participants' remembering of the protagonist's name ( $\chi^2(5, N = 960) = 795.45, p < .001$ ), origin ( $\chi^2(5, N = 960) = 846.76, p < .001$ ) and the narrative voice used ( $\chi^2(1, N = 960) = 592.00, p < .001$ ) with each of the manipulated factors (i.e., protagonist's origin and narrative voice used). In addition, there were no significant differences across the 12 conditions when recalling the protagonist's age ( $F(2, 257) = 1.78, p = .053, \eta^2 = .020$ ) and thus, we conclude that the experimental manipulation was successful.



**Table 5**

*Conditional Indirect Effects of Narrative Frame on Feeling Thermometer (Experiment*

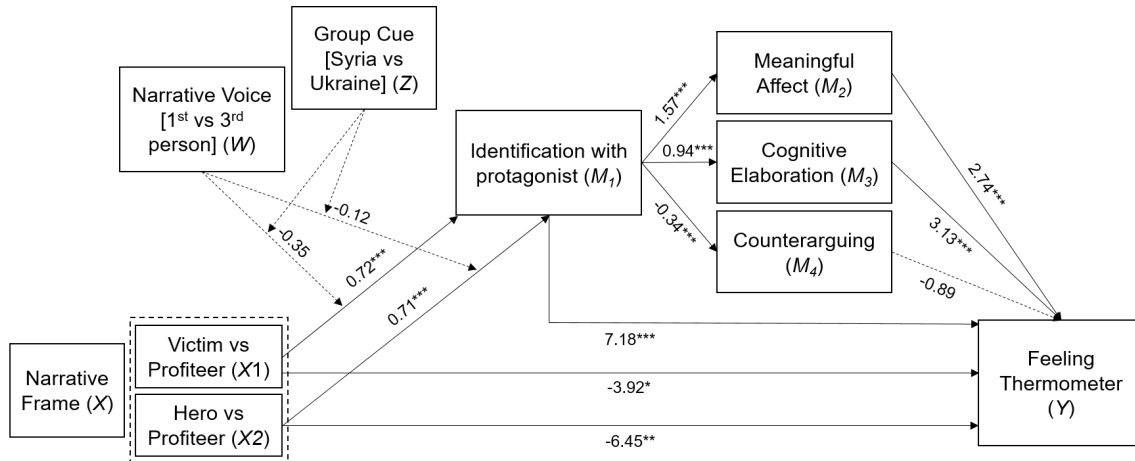
2).

Indirect Effects via	X1: Victim vs Profiteer frame				X2: Hero vs Profiteer frame			
	Effect	Boot SE	Boot 95% CI		Effect	Boot SE	Boot 95% CI	
			LL	UL			LL	UL
<i>Identification with the Protagonist → Feeling Thermometer</i>								
3 <sup>rd</sup> person-Syria	4.65	1.52	2.04	7.98	3.54	1.31	1.33	6.46
3 <sup>rd</sup> person-Ukraine	5.99	1.58	3.16	9.34	5.95	1.54	3.19	9.20
1 <sup>st</sup> person-Syria	5.60	1.61	2.78	9.08	4.71	1.39	2.32	7.69
1 <sup>st</sup> person-Ukraine	4.40	1.43	1.96	7.58	6.24	1.68	3.29	9.90
IMMM	-2.54	2.17	-7.19	1.54	-0.88	1.93	-4.72	2.95
<i>Identification with the Protagonist → Meaningful Affect → Feeling Thermometer</i>								
3 <sup>rd</sup> person-Syria	2.78	1.11	0.86	5.18	2.12	0.93	0.55	4.17
3 <sup>rd</sup> person-Ukraine	3.59	1.36	1.16	6.44	3.56	1.31	1.15	6.30
1 <sup>st</sup> person-Syria	3.36	1.24	1.06	5.95	2.82	1.09	0.87	5.14
1 <sup>st</sup> person-Ukraine	2.64	1.10	0.76	5.02	3.74	1.33	1.24	6.45
IMMM	-1.52	1.38	-4.56	0.90	-0.53	1.17	-3.15	1.68
<i>Identification with the Protagonist → Cognitive Elaboration → Feeling Thermometer</i>								
3 <sup>rd</sup> person-Syria	1.91	0.61	0.88	3.25	1.46	0.52	0.55	2.62
3 <sup>rd</sup> person-Ukraine	2.46	0.67	1.32	3.92	2.45	0.62	1.35	3.80
1 <sup>st</sup> person-Syria	2.31	0.62	1.23	3.65	1.94	0.55	0.99	3.15
1 <sup>st</sup> person-Ukraine	1.81	0.58	0.82	3.09	2.57	0.67	1.41	4.05
IMMM	-1.04	0.89	-2.89	0.64	-0.36	0.79	-1.95	1.20
<i>Identification with the Protagonist → Counterarguing → Feeling Thermometer</i>								
3 <sup>rd</sup> person-Syria	0.20	0.15	-0.04	0.53	0.15	0.12	-0.03	0.43
3 <sup>rd</sup> person-Ukraine	0.25	0.18	-0.06	0.64	0.25	0.18	-0.06	0.64
1 <sup>st</sup> person-Syria	0.24	0.17	-0.05	0.61	0.20	0.14	-0.05	0.51
1 <sup>st</sup> person-Ukraine	0.18	0.13	-0.04	0.49	0.26	0.18	-0.06	0.67
IMMM	-0.11	0.13	-0.42	0.08	-0.04	0.10	-0.26	0.15

*Note.* Analyses were conducted with bootstrapping-based inference using 10,000 samples for Standard Errors (SE) and Confident Intervals (CI). Lower Limit (LL) and Upper Limit (UP). IMMM = Index of Moderated-Moderated Mediation. Full paths can be seen in SOM.

**Figure 5**

*Full Conditional Indirect Effects of Narrative Frame on Feeling Thermometer (Experiment 2).*



*Note.* The frame had indirect effects on Help Intentions via Identification with the protagonist ( $B = 0.28$  and  $0.29$ ); and subsequently, via: Meaningful affect ( $B = 0.47$  and  $0.48$ ), Cognitive elaboration ( $B = 0.33$  and  $0.34$ ), and Counterarguing ( $B = 0.04$  and  $0.04$ ). Dotted lines indicate non-significant relations (i.e.,  $p > .05$ ). \*, \*\*, and \*\*\*, indicate  $p$  values of  $<.05$ ,  $<.01$ , and  $<.001$ , respectively.

**Conditional Indirect Effects of Narrative Frames on Dependent Variables**

Results of the full models (see SOM; Supplemental Tables S17-S20) indicated 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 ( $B = 0.72$  and  $0.71$ , respectively;  $p$ -values  $< .001$ ). Participants also reported more positive attitudes ( $B = 6.89$  and  $5.51$ , respectively;  $p$ -values  $< .01$ ) and 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).

**Table 6**

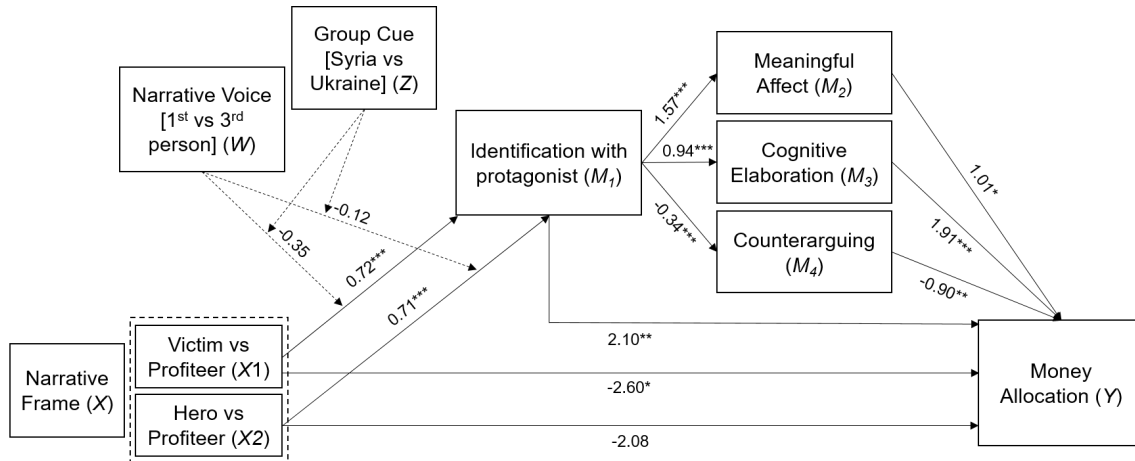
*Conditional Indirect Effects of Narrative Frame on Money Allocation (Experiment 2).*

Indirect Effects via	X1: Victim vs Profiteer frame				X2: Hero vs Profiteer frame			
	Effect	Boot SE	Boot 95% CI		Effect	Boot SE	Boot 95% CI	
			LL	UL			LL	UL
<i>Identification with the Protagonist → Money Allocation</i>								
3 <sup>rd</sup> person-Syria	1.36	0.59	0.35	2.65	1.04	0.49	0.24	2.13
3 <sup>rd</sup> person-Ukraine	1.76	0.71	0.50	3.28	1.74	0.68	0.52	3.17
1 <sup>st</sup> person-Syria	1.64	0.66	0.48	3.03	1.38	0.57	0.39	2.60
1 <sup>st</sup> person-Ukraine	1.29	0.57	0.34	2.54	1.83	0.73	0.54	3.38
IMMM	-0.74	0.70	-2.29	0.45	-0.26	0.59	-1.53	0.91
<i>Identification with the Protagonist → Meaningful Affect → Money Allocation</i>								
3 <sup>rd</sup> person-Syria	1.03	0.51	0.17	2.14	0.78	0.42	0.11	1.72
3 <sup>rd</sup> person-Ukraine	1.33	0.60	0.25	2.58	1.32	0.59	0.25	2.58
1 <sup>st</sup> person-Syria	1.24	0.56	0.23	2.45	1.04	0.49	0.19	2.09
1 <sup>st</sup> person-Ukraine	0.98	0.48	0.17	2.03	1.38	0.61	0.28	2.64
IMMM	-0.56	0.54	-1.79	0.35	-0.19	0.45	-1.16	0.69
<i>Identification with the Protagonist → Cognitive Elaboration → Money Allocation</i>								
3 <sup>rd</sup> person-Syria	1.17	0.35	0.56	1.90	0.89	0.30	0.35	1.54
3 <sup>rd</sup> person-Ukraine	1.50	0.37	0.85	2.29	1.49	0.35	0.87	2.24
1 <sup>st</sup> person-Syria	1.41	0.35	0.78	2.16	1.18	0.31	0.63	1.83
1 <sup>st</sup> person-Ukraine	1.11	0.33	0.53	1.80	1.57	0.36	0.92	2.34
IMMM	-0.64	0.54	-1.75	0.38	-0.22	0.48	-1.19	0.72
<i>Identification with the Protagonist → Counterarguing → Money Allocation</i>								
3 <sup>rd</sup> person-Syria	0.20	0.10	0.03	0.42	0.15	0.08	0.02	0.35
3 <sup>rd</sup> person-Ukraine	0.25	0.12	0.05	0.51	0.25	0.11	0.05	0.50
1 <sup>st</sup> person-Syria	0.24	0.11	0.04	0.47	0.20	0.09	0.04	0.41
1 <sup>st</sup> person-Ukraine	0.19	0.10	0.03	0.40	0.27	0.12	0.05	0.54
IMMM	-0.11	0.10	-0.34	0.07	-0.04	0.09	-0.22	0.14

*Note.* Analyses were conducted with bootstrapping-based inference using 10,000 samples for Standard Errors (SE) and Confident Intervals (CI). Lower Limit (LL) and Upper Limit (UL). IMMM = Index of Moderated-Moderated Mediation. Full paths can be seen in SOM.

**Figure 6**

*Full Conditional Indirect effects of Narrative Frame on Money Allocation (Experiment 2).*



*Note.* The frame had indirect effects on Help Intentions via Identification with the protagonist ( $B = 3.07$  and  $3.17$ ); and subsequently, via: Meaningful affect ( $B = 0.79$  and  $0.80$ ), Cognitive elaboration ( $B = 1.28$  and  $1.33$ ), and Counterarguing ( $B = 0.45$  and  $0.47$ ). Dotted lines indicate non-significant relations (i.e.,  $p > .05$ ). \*, \*\*, and \*\*\*, indicate  $p$  values of  $<.05$ ,  $<.01$ , and  $<.001$ , respectively.

When analyzing the paths of the effects (Tables 4-6), 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.

**Table 7**

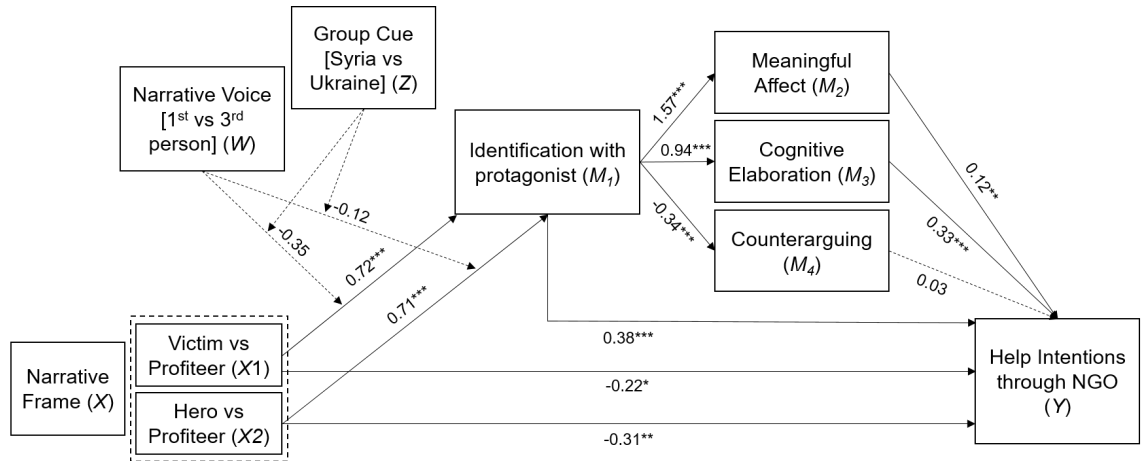
*Conditional Indirect Effects of Narrative Frame on Helping Intentions (Experiment 2).*

Indirect Effects via	X1: Victim vs Profiteer frame				X2: Hero vs Profiteer frame			
	Effect	Boot SE	Boot 95% CI		Effect	Boot SE	Boot 95% CI	
			LL	UL			LL	UL
<i>Identification with the Protagonist → Help Intentions</i>								
3 <sup>rd</sup> person-Syria	0.25	0.08	0.12	0.41	0.19	0.07	0.07	0.34
3 <sup>rd</sup> person-Ukraine	0.32	0.09	0.17	0.50	0.32	0.08	0.17	0.49
1 <sup>st</sup> person-Syria	0.30	0.08	0.16	0.48	0.25	0.07	0.13	0.40
1 <sup>st</sup> person-Ukraine	0.24	0.07	0.11	0.40	0.33	0.08	0.18	0.52
IMMM	-0.14	0.12	-0.39	0.08	-0.05	0.10	-0.26	0.15
<i>Identification with the Protagonist → Meaningful Affect → Help Intentions</i>								
3 <sup>rd</sup> person-Syria	0.12	0.05	0.03	0.23	0.09	0.04	0.02	0.19
3 <sup>rd</sup> person-Ukraine	0.16	0.06	0.05	0.28	0.16	0.06	0.05	0.28
1 <sup>st</sup> person-Syria	0.15	0.06	0.05	0.27	0.13	0.05	0.04	0.23
1 <sup>st</sup> person-Ukraine	0.12	0.05	0.03	0.22	0.17	0.06	0.05	0.29
IMMM	-0.07	0.06	-0.20	0.04	-0.02	0.05	-0.14	0.08
<i>Identification with the Protagonist → Cognitive Elaboration → Help Intentions</i>								
3 <sup>rd</sup> person-Syria	0.20	0.05	0.11	0.31	0.16	0.05	0.07	0.26
3 <sup>rd</sup> person-Ukraine	0.26	0.05	0.17	0.37	0.26	0.05	0.17	0.36
1 <sup>st</sup> person-Syria	0.25	0.05	0.15	0.35	0.21	0.05	0.12	0.30
1 <sup>st</sup> person-Ukraine	0.19	0.05	0.10	0.30	0.27	0.05	0.18	0.38
IMMM	-0.11	0.09	-0.30	0.07	-0.04	0.08	-0.20	0.13
<i>Identification with the Protagonist → Counterarguing → Help Intentions</i>								
3 <sup>rd</sup> person-Syria	-0.01	0.01	-0.02	0.01	-0.01	0.01	-0.02	0.00
3 <sup>rd</sup> person-Ukraine	-0.01	0.01	-0.03	0.01	-0.01	0.01	-0.03	0.01
1 <sup>st</sup> person-Syria	-0.01	0.01	-0.03	0.01	-0.01	0.01	-0.02	0.01
1 <sup>st</sup> person-Ukraine	-0.01	0.01	-0.02	0.01	-0.01	0.01	-0.03	0.01
IMMM	0.00	0.01	-0.01	0.02	0.00	0.00	-0.01	0.01

*Note.* Analyses were conducted with bootstrapping-based inference using 10,000 samples for Standard Errors (SE) and Confident Intervals (CI). Lower Limit (LL) and Upper Limit (UL). IMMM = Index of Moderated-Moderated Mediation. Full paths can be seen in SOM.

**Figure 7**

*Full Conditional Indirect effects of Narrative Frame on Helping Intentions (Experiment 2).*



*Note.* The frame had indirect effects on Help Intentions via Identification with the protagonist ( $B = 0.17$  and  $0.16$ ); and subsequently, via: Meaningful affect ( $B = 0.46$  and  $0.47$ ), and Cognitive elaboration ( $B = 0.21$  and  $0.21$ ). Dotted lines indicate non-significant relations (i.e.,  $p > .05$ ). \*, \*\*, and \*\*\*, indicate  $p$  values of  $<.05$ ,  $<.01$ , and  $<.001$ , respectively.

Finally, we did not find support for Hypothesis H4; that is neither the narrative voice nor the group cue (i.e., country of origin) conditioned the indirect effects of the frame on the dependent variables.

**Discussion**

The replicated study in Hungary confirms nearly all effects observed in Experiment 1. This includes the impact of narrative framing on identification with the protagonist, attitudes, intentions to help immigrants, and the proposed mediators. However, no interaction effects were found for the group cue or narrative voice.

Similar to Experiment 1, testimonies framing immigrants as victims or heroes, as opposed to profiteers, led to stronger identification, more positive outgroup attitudes, and increased intentions to help as hypothesized (e.g., Algoe & Haidt, 2009; Eisenberg & Miller, 1987) and found in previous studies (Igartua & Cachón-Ramón, 2023). Contrary to expectations and existing literature (see the meta-analysis of Huang et al., 2023),

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however, no significant relationship was found between group cue and narrative voice among Hungarian participants. This (lack of) finding may stem from the heightened sensitivity of the immigration topic in Hungary (Meuleman et al., 2009), potentially overshadowing the influence of certain testimony elements.

Narrative framing's indirect effects were replicated, operating through identification and subsequent parallel mediators: meaningful affect, cognitive elaboration, and counterarguing. Intense identification with the protagonist correlated with improved attitudes and increased helping intentions, primarily driven by heightened affect and reflection on the testimony. Although greater identification led to decreased counterarguing (e.g., Igartua & Rodríguez-Contreras, 2020; Watts et al., 2023), this did not consistently translate into spillover effects on attitudes or helping intentions.

### **General Discussion**

The persuasive impact of immigration testimonials has been confirmed through two experiments in distinct socio-cultural contexts, highlighting their efficacy in the realm of work immigration and elucidating the framing and pathways of these effects. Notably, these effects remain consistent across diverse narrative voices and immigrant groups without dependency on the narrative voice or group cue used.

#### **Identification with the Protagonist: Main Mediator**

Identification with the protagonist emerges as a central mediator, with stories emphasizing victimhood and heroism generating positive effects on intergroup relations. This is evidenced across varied narrative voices and immigrant origins (Moroccans and Ecuadorians in Spain, Syrians and Ukrainians in Hungary), highlighting the robustness of these effects. Immersion in narratives depicting victims or heroes enhances identification (Ratcliff & Sun, 2020), fostering a connection with the outgroup and triggering a cascade of psychological effects.

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Analyzing the unique contributions of experimental conditions in victimization-related stories reveals heightened anger and empathy (e.g., Batson, 1991; Snyder & Dwyer, 2013) (see SOM), explaining effects on identification and direct impacts on dependent variables. Heroism, focusing on competence and moral character (i.e., legitimate authority; see Fiske, 1992; Henrich & Gil-White, 2001), induces meaningful affect (see Supplemental Tables S4 and S14) and aligns with affiliative intentions and prosociality (Algoe & Haidt, 2009; Stellar et al., 2017).

The heightened identification with the protagonist directly influences crucial variables for intergroup relations, from simple gestures (e.g., sharing stories online) to complex forms of help (e.g., distributing money, volunteering). These effects demonstrate stability across diverse contexts, where host-immigrant relationships and attitudes toward immigrants vary significantly (see Cea D'Ancona, 2007; Meuleman et al., 2009). Thus, concise testimonials wield transformative potential, serving as impactful tools to enhance intergroup relations (Park, 2012).

### **Ripple Effects: Subsequent effects via Affect and Cognitive Responses**

These experiments, on the other hand, 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), fostering meaningful affect (in the form of awe or moral elevation; see Oliver et al., 2012) and enhancing intergroup attitudes and prosocial behaviors (Igartua et al., 2023). Additionally, this type of affect also increase recipients' well-being and affiliation tendencies (Stellar et al., 2017) and thus, it is beneficial at the intra-personal and inter-group levels.



Conversely, stronger identification affects cognitive responses, leading to deeper information processing and reduced counterarguing, resembling 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). Nonetheless, we consider important to note how it is always affected by the levels of identification with the protagonist. This not only further highlights the centrality of this mechanism in testimonial processing (Ratcliff & Sun, 2020), but also corroborates how past research has used it (see Igartua & Cachón-Ramón, 2023).

### **Lack of Three-Way Interaction: Limitations and Future Research**

Finally, we did not find the hypothesized effects of the group cue or the narrative voice; neither direct effects (see SOM), nor interaction effects proposed in the full model. Concerning the group cue, the stable lack of effects should guarantee further investigation in the context of intergroup relations. In part, due to the fact that outgroup attitudes (i.e., towards different groups of immigrants) are strikingly different in Spain (Cea D'Ancona, 2007) and in Hungary (Meuleman et al., 2009). Additionally, the point of view or narrative voice employed had no effect on any variable of these experiments. This is surprising due to the accumulated evidence suggesting it is a relevant moderator in narrative persuasion (see Chen & Bell, 2022) and likely to interact with group cue (see Huang et al., 2023).

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. Despite these challenges, the main effects presented here are robust, and consistent across samples and statistical controls (see SOM), indicating an alternative pathway to perceived similarity and

narrative voice hypotheses. The results emphasize the transformative potential of immigration-related testimonials in improving intergroup relations and recipient well-being.

### **Conclusion**

In conclusion, the study highlights the undeniable influence of testimonial narratives on intergroup relations. Framing narratives with themes of victimhood and heroism, rather than profiteering, initiates a cascade of effects that benefit both intergroup relations and the well-being of narrative recipients. While narrative voice and group cues did not exhibit effects, these findings underscore the need for further exploration to unravel the intricacies of intergroup relations and the unique pathways through which immigration testimonials shape attitudes and intentions to help. Overall, this research positions immigration-related testimonials as powerful tools for bridging gaps between communities and fostering better relationships.

### **Ethical Permission**

This study was approved by the Ethical Board of the Pompeu Fabra University (application No 272).

### **Open Practices**

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/>

### **Author Contributions**

V.B.-M. conceptualized the study and obtained the funding for this research project. J.J.I. provided detailed consulting to V.B.-M. for the conceptualization of the study. The three authors together designed the experiments and all other aspects concerning the investigations. J.J.P. acted as an administrator, conducted the data

analyses (with supervision by J.J.I. and V.B.-M.) and wrote a preliminary draft of the manuscript, which was then reviewed and accepted by all authors.

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