

Pre-Analysis Plan

The Marocchinate: Collective memory or transmission of beliefs?

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Survey questions

1. In which country were you born? <Italy/Other Country>
2. Did at least one of your parents migrate to Italy from abroad? <Yes/No>
3. Which region do you reside in? <Dropdown>
4. Which province do you reside in? <Dropdown>
5. Which municipality do you reside in? <Dropdown>
6. What is your gender? <Dropdown: Male/Female/Other/I rather not say>
7. What is your year of birth? <Input>
8. What is your civil status? <Dropdown>
9. What is your highest education level? <Dropdown>
10. What is your current employment situation? <Dropdown>
11. In which municipality did your ancestors reside in 1945 (or thereafter)? You can enter information for up to six ancestors.
 - If you do not know the exact municipality, please provide the most precise location possible.
 - If you do not have information about one or more of your ancestors, write “NA”.
 - If one of your ancestors resided in a country other than Italy, please indicate the name of that country.
 - a. Father: <Input>
 - b. Mother: <Input>
 - c. Paternal grandfather: <Input>
 - d. Paternal grandmother: <Input>
 - e. Maternal grandfather: <Input>
 - f. Maternal grandmother: <Input>
12. A random 50% of subjects will be assigned to the Treatment group and see the following text:

Please read the following text carefully:

In 2015, Italy faced an extraordinary wave of migration, with over 150,000 arrivals in a single year. Many migrants came from Syria and African countries, such as Sudan, Nigeria, Eritrea, and Somalia. This migratory wave put strong pressure on

the Italian reception system, arousing widespread concerns about security, the safety of Italian women, public order, and economic sustainability.

According to the message you just read, approximately how many migrants arrived in Italy in 2015?

(A) Less than 50,000 (B) Around 100,000 (C) Over 150,000 (D) I don't know

A random 50% of subjects will be assigned to the Control group and see the following text:

Please read the following text carefully:

In 2015, Italy faced a series of extreme weather events. Numerous municipalities suffered floods, with more than 400 millimeters of rain falling in a single day. These events caused casualties and serious damage to houses, businesses, and agriculture. The management of the emergency aroused criticism from public opinion, with concerns about the government's ability to deal with disasters and protect the affected communities.

According to the message you just read, approximately up to how many millimeters of rain falling in a single day occurred in Italy in 2015?

(A) Less than 200 (B) Around 300 (C) Over 400 (D) I don't know

13. Do you know about the events commonly described as Marocchinate?

<Yes/No><Timestamp>

14. Only if 12) = YES:

- a. Can you describe in your own words what the Marocchinate were? <Text Input>
- b. How was the story of the Marocchinate told to you, and what emotions or feelings did the person convey while telling it? <Text Input>
- c. Where did you learn about Marocchinate? Check all that apply. <Ticks:
Friends / Family / Neighbors / Local organizations / Local news or newspapers / National news or organizations / Schools / Other (specify).

Debriefing screen shown to all.

Marocchinate is a term used to describe acts of mass sexual violence and killings attributed to Moroccan soldiers who fought for France during World War II. These troops were part of the French Army and fought alongside the Allies, who were working to free Italy from German occupation. Reports of widespread violence emerged as the troops advanced after key battles.

15. In your opinion, if we consider 100 people from Syria and Northern Africa living in Italy, how many of them do you think would sexually harass an Italian woman?

<Slider: 0%- 100%>

16. Now think back to when you were a child: how do you think the following people would have answered the previous question? The previous question was:
“In your opinion, if we consider 100 people from Syria and Northern Africa living in Italy, how many of them do you think would sexually harass an Italian woman?”

- Your father <Slider>
- Your mother <Slider>
Your paternal grandfather <Slider>
- Your maternal grandfather <Slider>
- Your paternal grandmother <Slider>
- Your maternal grandmother <Slider>
- Your friends <Slider>
- Your teachers <Slider>
- Your classmates <Slider>
- Your neighbors <Slider>

17. For each national election, please indicate the party you voted for in the Chamber of Deputies:

- a. 2008 General Election: <Dropdown: Il Popolo della Libertà; Italia dei Valori; La Sinistra l’Arcobaleno; Lega Nord; Partito Democratico; Unione di Centro; Other; I did not vote>
- b. 2013 General Election: <Dropdown: Fratelli d'Italia; Il Popolo della Libertà; Lega Nord; Movimento 5 Stelle; Partito Democratico; Scelta Civica; Other; I did not vote>
- c. 2018 General Election: <Dropdown: Forza Italia; Fratelli d'Italia; Lega; Liberi e Uguali; Movimento 5 Stelle; Partito Democratico; Other; I did not vote >
- d. 2022 General Election: <Dropdown: Azione–Italia Viva; Forza Italia; Fratelli d'Italia; Lega; Movimento 5 Stelle; Partito Democratico; Other; I did not vote>

18. [conditional on answer to 16d.] Think about the last elections (2022 general elections), which of the following reasons would you say influenced your decision on whom to vote for most? <pick up to three>

- a. The state of the economy
- b. Inflation
- c. Immigration
- d. Pensions and retirement
- e. The management of public services
- f. National security and crime
- g. Climate change and the environment
- h. Other, namely [<text input>]

i. I don't know

19. Do you have any comments or remarks <Text Input>

Exclusion criteria

Anyone finishing the survey in under 3 minutes will be excluded.

Anyone not born in Italy or with at least one migrant parent or two migrant grandparents will be excluded. (Qs 1&2&11)

Anyone not residing in the target regions of Abruzzo, Campania, Lazio, Molise, Tuscany, & Umbria will be excluded. (Q3)

Anyone who enters words or strings of characters that are clearly not municipalities or countries, and the entry does not serve the purpose of communicating that they do not wish to or cannot answer the question. (Q11)

Hypotheses

Ghidoni & Schindler (2025) establish that locations that were exposed to the atrocities committed by French Moroccan troops do not vote significantly more for the far right after the inflow of migrants and refugees from former Yugoslavia, Albania and the Kosovo in the 1990s and early 2000s, but they shift substantially towards the far right after the large inflow of refugees predominantly from Northern Africa into Italy, which started around 2010.

These results suggest a contagion of racial attitudes: The initial event was perpetrated by Moroccans and spilled over to trigger resentment towards Syrians and North Africans (but not Albanians and Yugoslavians) several decades later. The purpose of this survey is to establish the mechanism of this contagion.

There are four (not necessarily mutually exclusive) possibilities for how this contagion survives generations:

- Alternative 1a:

The atrocities by Moroccans entered collective memory in the municipalities where they were committed. This collective memory survives across generations. In both cases, with the inflow of Syrians/North Africans and Albanians/Yugoslavians, locals simulate the unfamiliar situation by relying on personal and collective memory. If memory recall is limited (e.g., a la Bordalo et al, 2024), and that applies to collective memory as well, differences in similarity between Syrians/North Africans and Albanians/Yugoslavians may be responsible

for the observed effect: Because Albanians/Yugoslavians are not perceived as similar to Moroccans, the atrocities do not enter the simulation of the present. But with a perceived similarity between Syrians/North Africans and Moroccans, they do.

- Alternative 1b:

The atrocities by Moroccans entered collective memory in the municipalities where they were committed. This collective memory survives across generations. In both cases, with the inflow of Syrians/North Africans and Albanians/Yugoslavians, locals simulate the unfamiliar situation by relying on personal and collective memory. Even if memory recall is perfect, differences in similarity between Syrians/North Africans and Albanians/Yugoslavians may be responsible for the observed effect: Because Albanians/Yugoslavians are not perceived as similar to Moroccans, the experiences do not lead to contagion. But with a perceived similarity between Syrians/North Africans and Moroccans, they do.

- Alternative 2a:

The atrocities by Moroccans impact the attitudes of the initially treated generations (and do so in a contagious way: i.e., similarity between Moroccans and Syrians/North Africans is sufficient to create the spillover). These attitudes are then passed on to the next generations horizontally (i.e., they are transmitted through the neighborhood: social networks, peers, etc).

- Alternative 2b:

The atrocities by Moroccans impact the attitudes of the initially treated generations (and do so in a contagious way: i.e., similarity between Moroccans and Syrians/North Africans is sufficient to create the spillover). These attitudes are then passed on to the next generations vertically (i.e., they are transmitted across generations: from parents to children, etc).

The difference between both alternatives 1 and alternatives 2 is that under alternative 1, the beliefs (in the form of collective memory) are transmitted across time even though Marocchinate did not influence the attitudes of the initial generation significantly. Under alternative 2, there may be a collective memory, which does not necessarily influence contemporary decisions because Marocchinate changed attitudes in the initial generation, and these attitudes are then passed on to future generations.

The difference between 1a and 1b is that collective memory either needs to be recalled (a) or associated sufficiently between groups (b) to enable contagion. The difference between 2a and 2b lies in who facilitates the transmission across time.

Hypothesis testing

Sample definition: In addition to the exclusions defined above, we will use the following sample definitions:

Full Sample: All respondents who survive after applying the exclusion criteria.

Always Treated: We will consider a stricter and looser definition of this sample. The stricter one is: All respondents in the Full Sample who indicate in Q5 to reside in a municipality with atrocities and, if born before 1964, whose parents were both from an affected municipality. Or if born in 1964 or later, whose grandparents and parents were all from an affected municipality.

The looser one is: All respondents in the Full Sample who indicate in Q5 that they reside in a municipality with atrocities and, if born before 1964, who had at least one parent from an affected municipality. Or if born in 1964 or later, whose (weak) majority of grandparents and parents were from an affected municipality.

Depending on the number of observations that remain after applying this sample restriction, we will apply the stricter or looser one.

Never Treated: We will consider a stricter and a looser definition of this sample. The stricter one is: All respondents in the Full Sample who indicate in Q5 to reside in a municipality without atrocities and, if born before 1964, whose parents were both from an unaffected municipality. Or if born in 1964 or later, whose grandparents and parents were all from an unaffected municipality.

The looser one is: All respondents in the Full Sample who indicate in Q5 to reside in a municipality without atrocities and, if born before 1964, who had at least one parent from an unaffected municipality. Or if born in 1964 or later, whose (weak) majority of grandparents and parents were from an unaffected municipality.

Depending on the number of observations that would remain after applying this sample restriction, we will apply the stricter or looser one.

Pure Sample: The union of “Always Treated” and “Never Treated”. We will always use the same (i.e., loose or strict) definition for both subsamples.

Movers to Atrocities: We will consider a stricter and a looser definition of this sample. The stricter one is: All respondents in the Full Sample who indicate in Q5 to reside in a municipality with atrocities and, if born before 1964, whose parents were both from an

unaffected municipality. Or if born in 1964 or later, whose grandparents and parents were all from an unaffected municipality. Also includes (to later serve as control) all “Never Treated” respondents.

The looser one is: All respondents in the Full Sample who indicate in Q5 to reside in a municipality with atrocities and, if born before 1964, who have at least one parent from an unaffected municipality. Or if born in 1964 or later, whose (weak) majority of grandparents and parents were from an unaffected municipality. Also includes (to later serve as control) all “Never Treated” respondents.

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Tests:

- **Test 1:** In the “Pure” sample & only respondents who display an accurate understanding of the Marocchinate in Q13a: Do respondents answer yes to Q12 more often when primed with the 2015 refugee crisis in municipalities where atrocities happened, relative to the priming effect in municipalities without atrocities?
- **Test 2:** In the “Pure” sample & only respondents who display an accurate understanding of the Marocchinate in Q13a: Do respondents who answer yes to Q12 answer in fewer seconds when primed with the 2015 refugee crisis in municipalities where atrocities happened, relative to the priming effect in municipalities without atrocities?
- **Test 3:** In the “Always Treated” sample: Do respondents in Q13c consistently mention neighborhood/social network-related occasions to learn about Marocchinate?

- **Test 4:** In the “Pure” sample: Do respondents’ answers for themselves in Q14 versus the other items related to social network/neighborhood in Q15 correlate weakly stronger in municipalities affected by atrocities than in municipalities not affected by them?
- **Test 5:** In the “Pure” sample: Do respondents’ answers for the items related to social network/neighborhood (excluding family and themselves) in Q15 score higher in municipalities affected by atrocities than in municipalities not affected by them?
- **Test 6:** In the “Movers to Atrocities” sample: Do respondents’ answers for the item about themselves in Q15 score higher among respondents living in municipalities affected by atrocities than without?
- **Test 7:** In the “Pure” sample: Do respondents’ answers for themselves versus the other items related to family in Q15 correlate weakly stronger in municipalities affected by atrocities than in municipalities not affected by them?
- **Test 8:** In the “Pure” sample: Do respondents’ answers for the items related to family (excluding social network/neighborhood and themselves) in Q15 score higher in municipalities affected by atrocities than in municipalities not affected by them?
- **Test 9:** In the “Movers from Atrocities” sample: Do respondents’ answers for the item about themselves in Q15 score higher among respondents living in municipalities affected by atrocities than among those in municipalities?

Tests will be conducted using standard non-parametric tests (e.g., Mann-Whitney tests) or linear regressions, which will include respondents’ social demographics and geographic controls.

Tests 1 and 2 establish whether the recall of collective memory is limited (in the sense of Bordalo et al., 2024). **Test 3** establishes whether collective memory exists.

If we do not find an affirmative answer to **Tests 1 and 2**, we can rule out **Alternative 1a** as a major driver (independent of the result of Test 3).

If we do not find an affirmative answer to **Test 3**, we can rule out **Alternative 1a and 1b** as major drivers (independent of the results of Tests 1 and 2).

Tests 4 and 5 establish that preferences are persistent across time and were high in the social network already prior to the refugee crisis. **Test 6** establishes whether moving to atrocity-exposed areas, coming from a never-exposed family, changes attitudes too.

If we do not find an affirmative answer for **Test 4, Test 5, and/or Test 6**, we can rule out **Alternative 2a** as the main driver. However, **Test 4** alone does not allow us to distinguish between horizontal transmission and collective memory, as correlations in responses within treated areas may result from collective memory rather than horizontal transmission. **Test 6** provides additional evidence by examining whether moving into

treated areas is associated with belief changes, which would be unlikely under a pure collective memory mechanism. Affirmative results in **Tests 4–6** would therefore be difficult to reconcile with **Alternatives 1a or 1b** alone.

Tests 7 and 8 establish that preferences are persistent across time and were high in the family already prior to the refugee crisis. **Test 9** establishes whether moving away from atrocity-exposed areas coming from an exposed family changes attitudes too.

If we do not find an affirmative answer for **Test 7, Test 8, and/or Test 9**, we can rule out **Alternative 2b** as the main driver. If we do find affirmative evidence in those tests, then **Alternatives 1a and 1b** can be ruled out as the main driver.

Since migration may be partially endogenous, we view Tests 6 and 9 as merely supporting Tests 4, 5, and 7, 8. In case of contradicting results of tests 4, 5 with 6 and/or 7, 8 with 9, we hence put more trust in the results from 4, 5, 7, 8.

Additional analyses

In addition to the attempts to identify the mechanism detailed above, we also included a question in the survey to provide additional evidence for the main effects of Ghidoni & Schindler (2025):

Q16 asks about voting in previous elections. We include this question to provide individual-level evidence (in the “Pure” sample) that voting indeed moved towards the far right at higher rates in areas exposed to the atrocities than in areas that were not. While we expect the results to be qualitatively similar to our aggregate analysis, there are several reasons why they may not reach statistical significance at conventional levels:

- The survey may have primed respondents in a way that influences their voting choice, e.g., due to social desirability bias (possibly adding noise)
- Respondents may not recall their voting choice, especially for elections as far back as 2008 (possibly adding noise)
- Respondents come from a very small sample compared to the group of voters

Q17 asks respondents for the reasons for their vote. We include this question to test whether migration was indeed the main concern for far-right voters in areas affected by Marocchinate. We use the “Pure” sample to show that voters indeed rank “Migration” higher in areas exposed to the atrocities than in areas that were not.