

Cultural Shock Transmission and Sense of Home among Second Generation Immigrants

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Differences in norms and traditions between immigrants and their host society are known to shape integration behaviors and the ways parents socialize their children. However, less is known about how the cultural distance between immigrants and natives at the time of arrival affects the integration of the second generation. Approaching culture through the lens of gender norms, this paper examines how the cultural shock experienced by first-generation migrants upon arrival shapes the multidimensional integration of their children in France. Our contribution is to measure cultural distance in a time-varying, arrival-cohort-specific way: using a dynamic index of gender norms, we construct the distance between France and each parent's country of origin at the time of migration, allowing cultural exposure to differ across arrival cohorts within the same origin group. We show that greater parental cultural distance is associated with a weaker sense of belonging to France among second-generation immigrants, while having no detectable impact on labor-market outcomes. These relationships exhibit little heterogeneity by education or gender. Evidence on mechanisms points to the intergenerational transmission of more conservative views on gender roles and to larger attitudinal gaps with natives. Negative attitudes of natives towards immigrants act as a catalyst for these effects.

JEL Codes: D91, J15, J24, J61

Key words: cultural shock, integration, intergenerational transmission, gender norms

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1 Introduction

Second-generation immigrants from the same origin are typically analyzed as a single group, implicitly treating “origin culture” as time-invariant (Fernández et Fogli, 2009). This paper argues that what matters for the children’s integration is not only where their parents come from, but also the cultural distance their parents faced at the time of migration, which can vary substantially across arrival cohorts within the same origin group. We approach culture through the lens of gender norms and construct an arrival-time measure of parental cultural shock based on the distance in gender equality between France and the origin country at the year of migration.

Using this measure, we estimate the effect of parental cultural shock on the integration of second-generation immigrants in France. Our main outcome is national belonging (subjective integration), and we also examine labour-market outcomes (objective integration). We show that greater parental cultural shock causally predicts a weaker sense of belonging to France among the second generation, while having no detectable effect on labor-market integration. These findings highlight the role of arrival-time cultural exposure—rather than origin alone—in shaping long-run integration trajectories and, in line with Borjas (1992) and Guiso *et al.* (2006), inform how integration policies should better target cohorts facing larger initial cultural gaps.

We use the Trajectoires et Origines (TeO) survey collected by INED and INSEE, which oversamples immigrants and their offspring and provides, for respondents aged 18–60, detailed information on parents’ countries of birth and timing of arrival in France. We focus on second-generation immigrants—individuals born in France with at least one parent born abroad—and exclude cases in which parents arrived before age 10, so that parental exposure to origin-country norms is meaningful; the resulting sample includes 7,718 individuals. Our main outcomes capture national belonging using three TeO items (“feel French”, “feel at home in France”, “feel seen as French”), and we also examine labor-market outcomes. We measure culture through gender norms: using the Historical Gender Equality Index, we construct for each parent an arrival-time “cultural shock” defined as the distance between gender norms in France and in the parent’s origin country at the time of migration (with exposure summarized over the pre-migration decade). Our empirical strategy exploits within-origin variation in the distance between origin country and French gender norms across parental arrival cohorts. Conditioning on a rich set of controls, we estimate the effect of parents’ cultural distance at arrival on the integration outcomes of their France-born children. This result is valid in a context where we control for fixed effects related to the parental country of origin and year of migration as well as the respondent’s department of residence.

Our results show that larger parental cultural distance at arrival substantially reduces subjective integration among second-generation immigrants. A one-standard-deviation increase in parental cultural shock lowers the probability of reporting that one feels seen as French by 0.37 standard deviations, feels at home in France by 0.18 standard deviations, and feels French by 0.19 standard deviations¹. Having one French-born parent mitigates these effects, whereas we find little heterogeneity by education or gender. The results are robust to alternative measures of cultural shock and to a wide range of specifications and fixed effects; they are also not driven by selective out-migration or by a small set of origin countries. In contrast, we detect no significant effects on labor-market outcomes, pointing to a divergence between cultural identity and economic integration.

¹Respectively 18.4 ppts, 7.7 ppts, and 8.1 ppts.

We explore several mechanisms. First, we examine whether parental cultural shock is associated with the intergenerational transmission of gender-role values. Using two TeO items—whether, when jobs are scarce, women should give priority to men in the labor market, and whether women should be free to decide about abortion—we re-estimate our preferred specification with these attitudes as outcomes. We find that greater parental cultural shock predicts more conservative views, particularly a lower support for women’s autonomy in abortion decisions, while showing little relationship with labor-market outcomes. These patterns are consistent with cultural shock operating through the transmission of less progressive gender norms, which may in turn contribute to weaker national belonging among the second generation.

In a second step, we address an important alternative explanation: our baseline measure may capture not only differences in gender norms at parents’ arrival in France, but also other dimensions of distance between origin and destination countries. We show that several such dimensions matter when considered in isolation. In particular, religious distance, freedom-of-expression distance, and economic distance at arrival are all negatively associated with subjective integration among the second generation. Yet, once these measures are entered jointly, gender-norm distance is the only cultural dimension that remains robustly significant. Taken together, these results suggest that gender norms play a distinctive role among the various dimensions of distance at arrival and lend support to our interpretation that their intergenerational transmission is an important driver of subjective integration.

Finally, we examine whether our results operate through more objective integration channels. Greater cultural distance at arrival may have worsened the labor-market trajectories of first-generation migrants, making exclusion visible within the family environment, or it may have translated into weaker labor-market outcomes for the second generation themselves. We find little evidence for either mechanism. Parental occupational downgrading does not account for the decline in subjective integration, and parental cultural shock is not significantly associated with second-generation labor-market outcomes. This points to a predominantly cultural rather than economic mechanism.

We conclude by discussing two broader implications of our findings. First, we ask whether the weaker sense of belonging to France associated with parental cultural shock is accompanied by a stronger attachment to the country of origin. We show that this is indeed the case: second-generation immigrants exposed to greater parental cultural distance are more likely to both identify with their origin and to report a strong sense of belonging to it, a pattern more consistent, in the words of [Berry \(1997\)](#), with separation than with marginalization. Second, we examine the role of the reception context. We find that perceived racism or discrimination significantly amplifies the negative effect of parental cultural shock on subjective integration, suggesting that the way immigrants and their children are received in the host society plays an important role in shaping the long-run consequences of cultural distance at arrival.

This paper contributes to the literature that studies immigrant integration beyond labor-market outcomes by focusing on identity and subjective integration. Building on [Berry \(1997\)](#)’s framework for acculturation and [Akerlof et Kranton \(2000\)](#)’s work on identity and economic behavior, recent research has increasingly used survey-based measures of belonging and perceived inclusion as meaningful integration outcomes.² We add to this literature by showing that identity outcomes among the second generation respond not only to parental origins, but also to the cultural distance their parents faced at the time of migration.

²See among other the important contributions of [Langevin et Vincent \(2013\)](#); [Nekby et Rödin \(2007\)](#); [Delaporte \(2019\)](#); [Carillo et al. \(2023\)](#); [Bisin et al. \(2011\)](#); [Cano-Urbina et Mason \(2016\)](#).

Using Trajectoires et Origines (TeO) for France, we document sizable effects on national belonging but no corresponding effects on labor-market outcomes, highlighting a wedge between identity-based and economic integration.

A second contribution concerns the measurement of culture and cultural distance. Much of the empirical literature relies on time-invariant proxies—such as linguistic or ancestry-based distances—that do not vary across arrival cohorts.³ Our approach instead introduces a time-varying, arrival-cohort-specific measure of cultural distance, and we operationalize culture through gender norms. Using the *Dilli et al. (2019)*’s Historical Gender Equality Index, we construct an arrival-time “cultural shock” defined by the origin–France distance in gender norms at parents’ migration date, generating within-origin variation across arrival cohorts that standard static proxies cannot capture. This builds on the insight in *Fernández et Fogli (2009)* that gender-related norms provide an informative proxy for culture, while allowing culture to evolve over time in a way that matters for migrants’ exposure.

Finally, our results speak to the literature on intergenerational transmission of cultural traits. Seminal work such as *Bisin et Verdier (2000)* emphasizes that parents shape the persistence of cultural traits, while more recent contributions highlight that transmission may interact with incentives and integration constraints (*Jaschke et al., 2022; Thill et Zanaj, 2026*). By focusing on second-generation outcomes and on parental arrival-time cultural shock, we provide evidence consistent with the transmission of gender-related values and show how such transmission can shape identity outcomes even when labour-market integration is unaffected.

The rest of this article is structured as follows. Section 2 presents the two main datasets used : TeO and HGEL, describing them through some stylized facts. Section 3 presents the methodology and associated empirical strategy employed. This section also details the construction of the measure of cultural shock. Section 4 expands on the results concerning subjective and economic integration outcomes, as well as on their heterogeneity. Their robustness is tested in Section 5. Section 6 discusses the results and sheds light on mechanisms while Section 7 discusses the role of perceived racism and the attachment to origins.

2 Data

2.1 Individual data

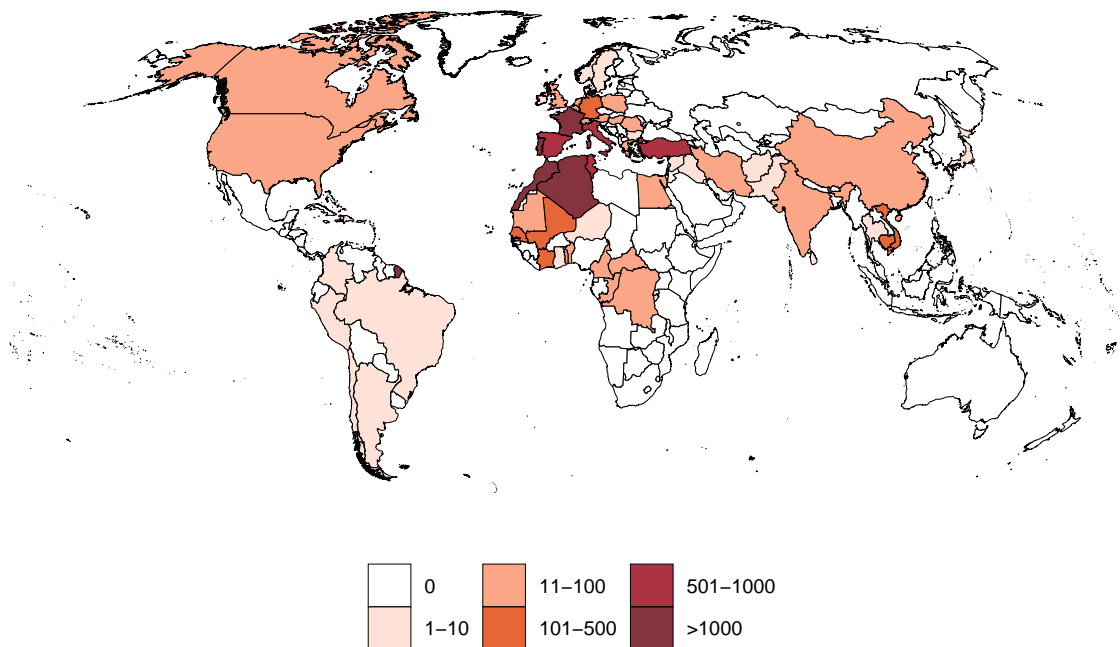
This paper relies on TeO survey data (Trajectoires et Origines), gathered by INED (Institut national d’études démographiques) and INSEE (Institut national de la statistique et des études économiques). Although TeO is designed to be representative of the French population, immigrants and their offspring are oversampled to enable more in depth analysis of integration and migration trajectories. Respondents correspond to French residents aged between 18 and 60 years old. A first survey wave was led in 2008-2009, followed by a second wave in 2019-2020. As the focus is made here on the behaviors of second-generation immigrants, we remove from the sample both natives and first generation immigrants. Are defined as second-generation immigrants all individuals born in France with at least one parent born abroad. We remove from the sample individuals

³On linguistic distance, see *Melitz et Toubal (2014); Spolaore et Wacziarg (2016)*; on genetic distance, see (*Wright, 1951; Cavalli-Sforza et al., 1994; Spolaore et Wacziarg, 2009*).

whose parents arrived in France before the age of 10 years old, under the rationale that immigrants who arrived too young have not been exposed enough to the norms and culture of their origin country. Our final sample is composed of 7,718 second-generation immigrants.

TeO provides information on the country of birth of both parents, as well as the timing of their potential arrival in France. Figure 1 presents the worldwide distribution of the fathers of our selected second-generation migrants (*cf.* Figure A.1 for the distribution of mothers). Main source countries correspond to Algeria, Morocco, Portugal and Turkey, reflecting the colonial and economic roots of migration to France (see for instance Weil, 2020).

Figure 1: Number of observations by origin country (considering fathers)



Besides, TeO interviewees are surveyed on their socioeconomic, social, familial and residential situations, in addition to their civic engagement. As the focus of this paper concerns integration outcomes, considering both subjective and objective indicators, TeO allows to capture both the sense of belonging in France and the integration level on the labor market.

Descriptive statistics from Table 1 illustrate one key advantage of the TeO survey: it allows us to study, within a unified framework, different generations of migrants as well as their parents. The parents of the second generation migrants included in our sample have to be distinguished from the first generation migrants interviewed in TeO as they belong to earlier migrant cohorts and exhibit substantially different characteristics.

Table 1: Individual characteristics and parental background by origin

	General sample		2nd generation sample			
	Natives (1)	1 st gen. (2)	By reference parent		Parental Characteristics	
			Mother (3)	Father (4)	Mother's (5)	Father's (6)
<i>Panel A: Years of Schooling</i>						
Total Sample	12.02	10.87	12.29	12.14	7.66	7.90
Algeria	–	10.35	11.91	11.63	6.70	6.93
Morocco	–	10.73	12.60	12.67	7.14	8.00
Portugal	–	8.18	12.30	12.30	5.71	6.00
Vietnam	–	12.55	14.34	14.58	8.64	12.09
<i>Panel B: Age at Arrival</i>						
Total Sample	–	15.43	–	–	22.00	23.50
Algeria	–	15.09	–	–	21.90	23.90
Morocco	–	15.49	–	–	21.58	23.00
Portugal	–	12.77	–	–	21.77	22.07
Vietnam	–	12.25	–	–	21.42	22.84
<i>Panel C: Observations (N)</i>						
Total Sample	9,399	11,675	5,882	6,463	7,718	7,718
Algeria	–	1,599	1,449	1,716	1,449	1,716
Morocco	–	1,387	347	716	647	716
Portugal	–	1,350	752	849	752	849
Vietnam	–	739	180	202	180	202

Note: The number of observations corresponds to the actual number of persons present in the sample; other descriptive statistics correspond to weighted moments.

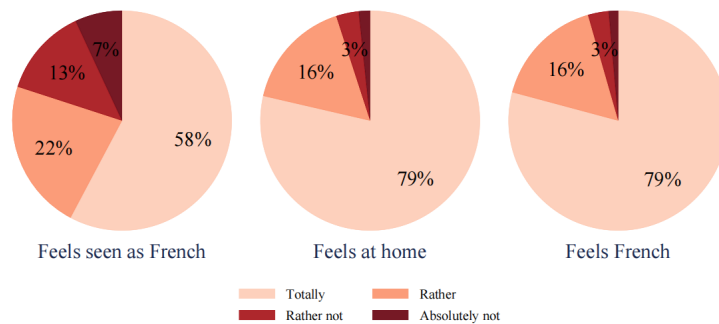
A salient pattern is the strong convergence in educational attainment between natives and second generation migrants. Average years of schooling are 12.02 among natives, compared with 12.29 and 12.14 for the second generation depending on whether the reference parent is the mother or the father, whereas first-generation migrants directly observed in TeO average only 10.87 years. At the same time, the parents of the second generation appear to belong to a markedly less educated cohort and to have migrated at older ages, with average schooling levels of 7.66 years for mothers and 7.90 for fathers. Taken together, these results point to substantial intergenerational upward mobility and to a marked convergence of the second generation toward natives, while also underlining the importance of distinguishing between the first-generation respondents in TeO and the parental migrant cohort from which the second generation descends; a feature that will be essential in the rest of the paper.

2.2 Subjective integration outcomes

Throughout the paper, we examine the subjective integration of second-generation immigrants through their sense of belonging. In TeO, belonging to France is assessed through three items: “Do you feel French?”, “Do you feel at home in France?”, and “Do you think that others see you as French?”. Responses are recorded on a four-point scale: “Totally agree”, “Rather agree”, “Rather disagree”, and “Totally disagree”. When analysing these questions separately, our main dependent variables are binary indicators equal to 1 for individuals answering “Totally agree”, and 0 otherwise.⁴

Figure 2 presents the distribution of responses to these identity-related questions among second-generation immigrants. Around 80% report feeling at home in France, whereas only about 60% report feeling seen as French by others. Although we argue that these indicators provide meaningful measures of subjective integration, it is important to note that an incomplete sense of belonging is not specific to immigrant populations and is also present among natives.⁵

Figure 2: Answers of 2nd generation immigrants to indicators of belonging



Note: Observations are weighted using the survey weights provided by TeO. The similar distributions for *Feels at home* and *Feels French* are coincidental.

When we further decompose responses to our main outcome variables by country of origin (see Figure A.4 in the Appendix), substantial cross-origin heterogeneity emerges. Individuals of Portuguese ancestry are, for instance, the most likely to report being seen as French by others, yet they are, on average, less likely than their Algerian counterparts to report feeling “totally French”. This pattern suggests that the three measures we use to proxy self-perceived integration capture distinct dimensions of the broader phenomenon.⁶

2.3 Gender norms and parental exposure to cultural shock

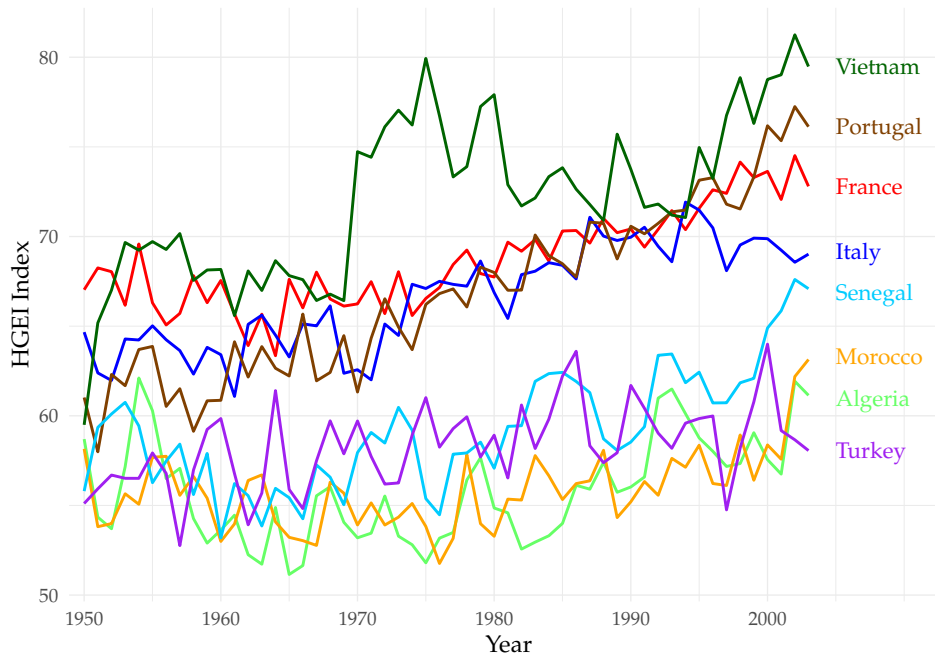
Culture is inherently multidimensional. In this paper, we study one salient dimension of culture: gender norms. We measure cultural shock at arrival as the gap in gender norms between an individual’s country

⁴As a robustness check, we also use an alternative coding in which individuals answering either “Totally agree” or “Rather agree” are coded as 1. The results remain qualitatively unchanged.

⁵Figures A.2 and A.3 in the Appendix display the sense of belonging for natives (defined as individuals with two parents born in France) and for first-generation immigrants in TeO Waves 1 and 2, respectively. While 84% of natives report being seen as French — 26 percentage points more than immigrants’ children (see Figure 2) — 23% of natives do not report feeling “totally at home” in France.

⁶If we focus on subjective integration in the main text, we do not fully disregard objective measures. In Sub-section 6.3, we show that objective integration, measured through employment and hours worked, is not correlated with our measure of cultural shock.

Figure 3: Historical Gender Equality Index (HGEI) for France and the main source countries of immigrants (1950-2003)



of origin and destination at the time of migration. This formulation draws on psychology and migration studies, which characterize migration to a culturally different environment as potentially generating an initial mismatch between internalized norms from the country of origin and those prevailing in the host society (Oberg, 1960; Berry, 1997; Berry *et al.*, 1987). In economic terms, we interpret this mismatch as a cultural adjustment cost.

Gender norms encompass multiple dimensions, including rights, roles, and broader living conditions that differ between men and women. To capture this multidimensionality, we rely on the Historical Gender Equality Index (HGEI) developed by Dilli *et al.* (2019). The HGEI is an arithmetically aggregated composite indicator covering four domains of inequality: health, intra-household autonomy, political power, and socioeconomic status. It ranges from 0 (extreme inequality) to 100 (full parity between men and women) and is available for 129 countries over the period 1950–2003, thus providing the broad cross-country and intertemporal coverage required for our analysis.

The HGEI is constructed from variables that are widely available across countries and capture salient aspects of gender equality. Each component is expressed as a female-to-male ratio, thereby isolating gender disparities from overall levels of development. Health is measured using life expectancy ratios and sex ratios at ages 0–5, capturing the phenomenon of “missing women” (Sen, 1992). Intra-household autonomy is proxied by the ratio of female to male age at marriage. Political power is measured by women’s share of seats in national parliaments. Socioeconomic status combines the ratio of years of education with female labor force participation. The overall index is computed as the arithmetic average of these four dimensions, allowing us to summarize multiple facets of gender inequality in a tractable and comparable way.

Figure 3 presents the HGEI for the main countries of origin of immigrants in France surveyed in TeO. The index displays substantial geographic and temporal variation, as further illustrated in Figure A.5, and points

to a divergence between two groups of countries. On the one hand, France occupies the upper end of the distribution throughout the period, alongside Portugal, Italy, and Vietnam, all of which reach relatively high HGEI levels by the end of the period (between 70 and 79). On the other hand, Turkey, Morocco, Algeria, and Senegal form a second group, following flatter trajectories and reaching comparatively lower levels by the end of the observation period (between 58 and 67). Because our analysis focuses on the parents of the interviewees, we use gender norms data only up to 2001; as a result, the fact that the HGEI ends in 2003 is not a concern.

To capture the gender-norm environment in which first-generation immigrants formed their beliefs prior to migration, we construct a measure of pre-migration exposure to gender norms for each parent from origin country o who migrated to France in year t . Using the HGEI, we average gender norms in the origin country over the ten years preceding migration, consistent with the idea that recent pre-migration exposure is especially formative.

$$EGN_{o,t}^{10 \text{ years before mig}} = \frac{1}{10} \times \sum_{t-10}^t HGEI_{o,t}$$

We then compare this pre-migration average with the level prevailing in France at the year of migration, thereby measuring gender-norm distance at arrival. gender-norm distance is computed using absolute values of differences. Accordingly, countries are considered more culturally distant from France when their level of gender equality differs more markedly from that prevailing in France, regardless of whether they are more conservative or more progressive. We compute this distance at the time of migration so as to capture the cultural shock experienced upon arrival, which may either hinder or facilitate the integration of first-generation immigrants:

$$CultShock_{o,t}^{Parent} = \left| HGEI_{France,t} - EGN_{o,t}^{10 \text{ years before migration}} \right|$$

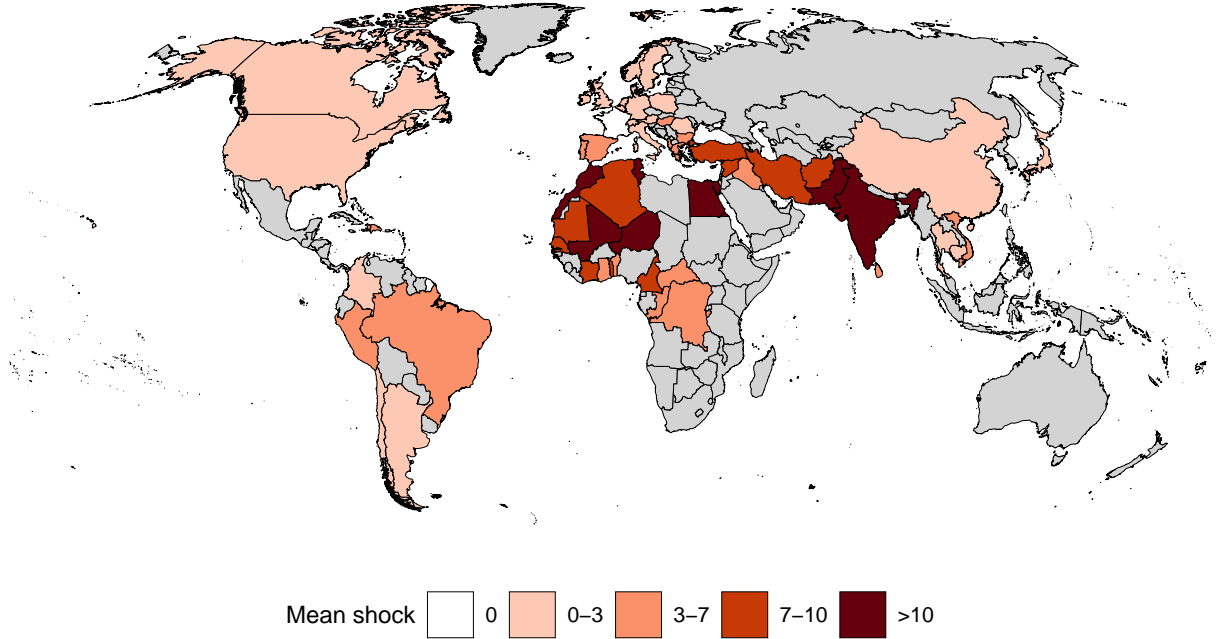
Larger values of $CultShock_{o,t}^{Parent}$ correspond to a greater mismatch between pre-migration exposure to gender norms in the country of origin and the level prevailing in France at the time of arrival. We compute this measure for all parents of second-generation immigrants for whom both the country of birth o and year of migration t are observed. Figure 4 shows the average gender-norm shock experienced by respondents' parents by country of origin. The largest shocks are observed for migrants from Africa and Southern Asia, especially Niger, Mali, and Pakistan. By contrast, migrants from the Americas, neighboring European countries, and East Asia appear to have experienced substantially smaller shocks in terms of gender norms.

As we consider that the cultural shock coming from both parents would influence 2nd generation immigrants, we compute for each surveyed individual the mean cultural shock of his parents.

$$CultShock_{o,t} = \frac{CultShock_{o,t}^{Father} + CultShock_{o,t}^{Mother}}{2}$$

When respondents have parents from different origin countries, their cultural shock measure reflects the average of the shocks experienced by each parent. As a result, respondents whose parents were exposed to different levels of gender-norm distance at arrival are assigned an intermediate level of cultural shock. Likewise, respondents with one French-born parent and one foreign-born parent have a lower average shock, since the contribution of the French-born parent is, by construction, equal to zero. Our measure is close to zero when both parents originate from countries with gender norms similar to those prevailing in France

Figure 4: Mean shock of parents, by origin country



at the time of migration. In our sample, its maximum value is 20.12, corresponding to respondents whose two parents migrated from countries that were particularly distant from France in terms of gender equality, while the sample mean is 5.79. For comparison, this value corresponds approximately, in 2003 (the last year available in the HGEI), to the gender-norm distance between France and countries such as Senegal, Paraguay, or Malaysia.⁷

Compared with more standard measures of cultural distance, such as genetic or linguistic distance, our approach has two advantages. First, because gender norms evolve over time, it captures within-country variation in culture. Second, it offers a more interpretable measure by focusing on a specific and economically meaningful dimension of culture rather than on an aggregate proxy. In this respect, our approach is consistent with [Fernández et Fogli \(2009\)](#), who show that gender-related attitudes provide a robust proxy for broader cultural values.

3 Empirical strategy

To facilitate the interpretation of the estimates, we begin with a linear probability model estimated on cross-sectional data using the individual survey weights provided by TeO. Our baseline specification is:

$$Y_i = \kappa + \beta CultShock_i + \gamma X_i + \delta_{of(i)} + \tau_{cf(i)} + \rho_{d(i)} + t_i + \varepsilon_i$$

⁷In Sub-section 5.2, we show that using either both parents, only the father or only the mother as a reference point to construct our cultural shock variable does not change our main results substantially. If we do not include parental education in our main analysis, we do so in Appendix C.2. Our main results hold qualitatively unchanged.

where Y_i denotes the integration outcome of respondent i , a second-generation immigrant. $CultShock_i$ is the respondent-specific measure of gender-norm distance at arrival, constructed from the migration history of the parent(s), as described above. X_i is a vector of individual sociodemographic controls, including gender, age, education, and number of children. $\delta_{of(i)}$ denotes fixed effects for the father’s country of origin, which absorb time-invariant differences across paternal origins, such as persistent cultural traits or migration-specific selection patterns. $\tau_{cf(i)}$ denotes fixed effects for the father’s year of migration (c^f), which capture cohort-specific conditions at arrival, including macroeconomic conditions, migration policy, and the reception environment in France⁸. $\rho_{d(i)}$ denotes fixed effects for the respondent’s current département of residence, which account for local contextual factors shaping integration outcomes, such as labor-market conditions, public goods provision, population diversity, and local integration policies. Standard errors are clustered at the département level.⁹ Finally, t_i is a dummy variable indicating the TeO wave from which the observation is drawn.

Our baseline specification relies on paternal fixed effects, since fathers are more frequently foreign-born than mothers in our sample. Although one may wish to saturate the model with both paternal and maternal fixed effects, doing so generates substantial collinearity because parental origins and migration histories are strongly correlated within households, leading to a marked loss of precision. We therefore treat specifications based on maternal fixed effects, as well as those including both sets of parental fixed effects, as robustness exercises. Reassuringly, these alternative specifications yield similar results.

Our coefficient of interest is β , which captures the relationship between parental gender-norm distance at arrival and respondents’ sense of belonging to France. Conditional on observed individual characteristics, paternal origin fixed effects, paternal migration-year fixed effects, and current département-of-residence fixed effects, β is identified from variation in cultural shock across individuals with different parental migration histories. In other words, β measures how a one-point increase in parental gender-norm distance at arrival is associated with respondents’ sense of belonging to France.

Interpreting β as the intergenerational effect of parental cultural shock at arrival on respondents’ sense of belonging to France requires a set of identifying assumptions. A central threat to this interpretation is selection into migration. While our focus on second-generation immigrants alleviates part of this concern, it does not remove it entirely. We therefore distinguish between two sources of selection: that of respondents’ parents into migration, and that of respondents themselves.

Regarding respondents’ parents, a potential concern is that changes in gender norms in the origin country—for example, a sharp deterioration in women’s rights around the time of migration—may themselves have induced emigration. If so, β could partly reflect the intergenerational transmission of the origin-country shock that prompted migration, rather than the effect of cultural distance at arrival per se. To address this concern, in Appendix A.1, we estimate a country-level regression in which annual migration flows are regressed on cultural distance at arrival, with origin-country and year-of-arrival fixed effects. We find that, conditional on country and year, migration flows are not pushed by cultural distance itself.

A related concern stems from selective out-migration after arrival in France. The first-generation migrants observed through the parents of our respondents are only those who remained in France long enough for

⁸Arrival cohorts of fathers and mothers are presented in Figure A.7.

⁹Alternative levels of clustering have been tested without changing our main results, see Appendix C.3.

their children to be surveyed in TeO. If first-generation migrants who experienced a stronger cultural shock at arrival were more likely to leave France, then our estimates would understate the true effect, since the most affected families would be less likely to remain in the sample. A similar concern applies to second-generation migrants themselves: if individuals raised in families exposed to stronger parental cultural shock, or more generally to less progressive gender norms, are more likely to emigrate from France, then the observed sample would again exclude those most affected, leading to attenuation bias. Using data from the ESS in Appendix C.2, Table C.1 shows that French expatriates do not differ significantly from non-migrant French nationals in terms of progressive attitudes. If anything, more progressive attitudes are negatively associated with the probability of living abroad, which is consistent with attenuation bias.

A further concern stems from a specific feature of the second wave of TeO, which was collected over a period that included the first COVID-19 lockdown in France. This raises the possibility that respondents' self-reported sense of belonging was affected by this episode in ways correlated with their living conditions, which may themselves be related to their parents' migration histories. To address this concern, Appendix C.4 replicates our main specification using only TeO-1 data. The results remain unchanged.

A final concern is that unobserved changes in origin countries around the time of migration may simultaneously affect both gender norms and the later sense of belonging of migrants' children. If such omitted factors drive our results, they are likely to reflect either country-specific shocks, cohort-specific shocks, or slow-moving changes within origin countries over time. To address this concern, we conduct a series of stress tests in which we sequentially exclude the main origin countries from the sample, one at a time (*cf.* Table C.5), and then exclude the migration decades one by one (*cf.* Table C.6). In addition, because origin-by-arrival-year fixed effects would mechanically absorb the variation in cultural shock that we seek to identify, we instead estimate a set of demanding alternative specifications. These augment our baseline model with controls for the economic and institutional conditions prevailing in the country of origin at the time of migration, as well as with origin-country-specific linear trends based either on the father's year of arrival or on the father's year of birth (*cf.* Table C.7). Across all these demanding specifications, our results remain largely unchanged, lending strong support to the view that our main findings are not driven by omitted origin-country dynamics unrelated to the cultural shock we identify.

We also test the robustness of our main results along several dimensions. First, we alter the coding of the outcome variable and examine the sensitivity of the estimates to alternative treatments of non-response (*cf.* Table 4). Second, we vary the construction of parental cultural shock, using alternative parent-specific definitions and a signed, rather than absolute, measure of gender-norm distance (*cf.* Figure 5 and Table B.2). Third, we assess whether the results depend on the length of pre-migration exposure to origin-country gender norms or on parents' age at arrival in France (*cf.* Figure 7). Fourth, we replace our baseline gender-norm measure with the World Bank's *Women, Business and the Law* index (*cf.* Figure 6). Fifth, we create placebo exposures to cultural distance, either computing a post-migration cultural shock or randomizing the migrations years of parents within each origin country (*cf.* Table 5 and Figure 8). Last, we recompute our preferred estimation including a control for ethnic segregation (*cf.* Table 6). Reassuringly, as shown in Section 5, the main findings remain qualitatively unchanged throughout.

4 Results

Table 2 reports the relationship between parental cultural shock at arrival and respondents' sense of belonging to France. Across all three outcomes, the estimated coefficients are negative and statistically significant in the preferred specification: greater gender-norm distance between France and the parents' country of origin is associated with a lower probability of feeling seen as French, feeling at home in France, and feeling French. These patterns provide consistent evidence that stronger parental cultural shock at arrival is associated with weaker subjective integration among the second generation.

Table 2: Impact of the parental cultural shock on sense of belonging

	Baseline	Adding FE		Adding controls & FE		
	(1)	Father (2)	Mother (3)	Father (4)	Mother (5)	Both (6)
Panel A – Feels seen as French						
Cult. shock	-0.042*** (0.002)	-0.044*** (0.003)	-0.042*** (0.003)	-0.043*** (0.003)	-0.040*** (0.003)	-0.027*** (0.005)
Panel B – Feels at home in France						
Cult. shock	-0.015*** (0.002)	-0.018*** (0.003)	-0.011*** (0.003)	-0.018*** (0.003)	-0.010*** (0.003)	-0.012** (0.005)
Panel C – Feels French						
Cult. shock	-0.015*** (0.002)	-0.020*** (0.003)	-0.012*** (0.003)	-0.019*** (0.003)	-0.011*** (0.003)	-0.009** (0.004)
FE Region & wave	✗	✓	✓	✓	✓	✓
FE Mother	✗	✗	✓	✗	✓	✓
FE Father	✗	✓	✗	✓	✗	✓
Controls	✗	✗	✗	✓	✓	✓
Observations	7,718	7,695	7,635	7,669	7,611	7,588

Notes: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. Standard errors clustered at the region level are reported in parentheses. Estimates are obtained using a linear probability model. The dependent variables are the probability of feeling seen as French (Panel A), feeling at home in France (Panel B), and feeling French (Panel C). In Columns (3) and (5), year-of-arrival and country-of-birth fixed effects are defined using the mother. In Columns (2) and (4), they are defined using the father. Column (6) includes fixed effects for both parents. Individual controls include gender, education level, year of birth, and number of children.

Column (1) reports the raw correlations between parental cultural shock and each measure of sense of belonging. Columns (2) and (3) then introduce fixed effects based on, respectively, the father's and the mother's country of origin and migration cohort. As discussed in the identification section, our preferred specification is Column (4), which combines paternal fixed effects with individual controls. We privilege this specification because fathers are more frequently foreign-born than mothers in our sample, while specifications including both parents' fixed effects raise collinearity concerns. For transparency, however, the table also reports estimates using maternal fixed effects and, in Columns (4) to (6), specifications that further include individual controls. Reassuringly, the estimated effect of cultural shock remains negative and statistically significant throughout. Column (6) provides the most demanding specification by including country-of-origin and migration-cohort fixed effects for both parents simultaneously. In that case, the coefficients remain negative and statistically significant for all three outcomes.

A one-unit increase in parental cultural distance reduces the probability of feeling seen as French by 4.3 percentage points, of feeling at home in France by 1.8 percentage points, and of feeling French by 1.9 percentage points. To illustrate the magnitude of these effects, consider two individuals whose parents migrated from Portugal, one in 1950 and the other in 1980. Over this period, the gender-norm distance between France and Portugal declined from slightly above 7 to approximately 0 (cf. Figure A.6). All else equal, the individual whose parent migrated in 1980 is therefore about 30 percentage points more likely to feel seen as French and about 13 percentage points more likely to feel French than the individual whose parent migrated in 1950.¹⁰

Figure A.6 also shows that convergence toward France in terms of gender norms was far from universal over the period 1950–1980. In some cases, the opposite pattern emerges. For instance, the gender-norm distance between Turkey and France increased over time, implying that, all else equal, an individual whose parents migrated from Turkey in 1980 would be less likely to report a strong sense of belonging to France than an otherwise similar individual whose parent migrated in 1950.

Coefficients in Panel A are two to four times larger than those in Panels B and C, meaning that the impact is more pronounced for the probability of feeling seen as French. This suggests that native attitudes are a channel through which inherited cultural shock affects subjective integration. This interpretation aligns with existing research on native attitudes toward immigrant populations (Jaschke *et al.*, 2022). Other potential mechanisms include the inter-generational transmission of economic difficulties, or of specific gender norms. We investigate these alternative channels in Section 6, and show that there is no reluctance to integrate from the second-generation immigrants.

Table 3 explores heterogeneity in the relationship between parental cultural shock and respondents' sense of belonging to France. Because our proxy for culture is based on gender norms, one might expect stronger effects among women. Panel A, however, provides little support for this hypothesis. The estimated effects are broadly similar across genders: parental cultural shock reduces the sense of belonging of both men and women, although the decline in the probability of feeling seen as French is somewhat larger for women.

Panel B shows that education does not substantially mitigate the effect of parental cultural shock. Respondents with a high-school degree or less are not systematically more affected than those with higher levels of education. The association between parental cultural shock and subjective integration is not confined to the least educated segment of the sample.

Panel C distinguishes between respondents with two foreign-born parents and those with only one. The negative effect of parental cultural shock on the probability of feeling seen as French remains present in both groups, supporting our baseline definition of second-generation immigrant status. By contrast, the effects on feeling at home in France and feeling French are concentrated among respondents with two foreign-born parents. While the cultural shock universally diminishes how second-generation immigrants believe they are perceived by society, a French ancestry appears to mitigate the impact on their internal sense of belonging.¹¹

¹⁰Magnitudes are obtained from the following calculations: $7 \times 4.3 = 30.1$ and $7 \times 1.9 = 13.3$. We use a linear probability model (LPM) primarily because its coefficients are directly interpretable. Following McFadden (2001), we relax the linearity assumption by estimating a logit model. We further assess the robustness of our findings by applying

Table 3: Heterogeneous effects of parental cultural shock on sense of belonging

	Seen as French (1)	Feels at home (2)	Feels French (3)	Seen as French (4)	Feels at home (5)	Feels French (6)
Panel A. Gender						
	Women			Men		
Cult. shock	-0.046*** (0.004)	-0.015*** (0.003)	-0.018*** (0.003)	-0.039*** (0.004)	-0.017*** (0.004)	-0.018*** (0.003)
Observations	4,173	4,173	4,173	3,496	3,496	3,496
Panel B. Education						
	No higher education			Higher-education diploma		
Cult. shock	-0.040*** (0.004)	-0.013*** (0.003)	-0.019*** (0.003)	-0.046*** (0.004)	-0.023*** (0.004)	-0.017*** (0.003)
Observations	4,471	4,471	4,471	3,198	3,198	3,198
Panel C. Parental origin structure						
	Two foreign-born parents			One French-born parent		
Cult. shock	-0.027*** (0.005)	-0.015*** (0.005)	-0.009* (0.005)	-0.028*** (0.007)	-0.001 (0.006)	0.001 (0.006)
Observations	4,611	4,611	4,611	3,058	3,058	3,058
Baseline controls & FE	✓	✓	✓	✓	✓	✓

Notes: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. Standard errors clustered at the département level are reported in parentheses. Estimates are obtained using a linear probability model with the individual controls and paternal fixed effects from Column (4) of Table 2. The dependent variables are the probability of feeling seen as French (Columns (1) and (4)), feeling at home in France (Columns (2) and (5)), and feeling French (Columns (3) and (6)).

5 Robustness

5.1 Robustness to alternative constructions of parental cultural shock

We first examine whether our findings depend on how parental cultural shock is constructed. Our baseline measure averages the cultural shock experienced by both parents and is based on the absolute distance in gender norms between France at the time of migration and the origin-country environment to which parents were exposed before migration. A natural concern is that the results may be sensitive either to the way parental shocks are aggregated or to the precise way in which gender-norm distance is measured.

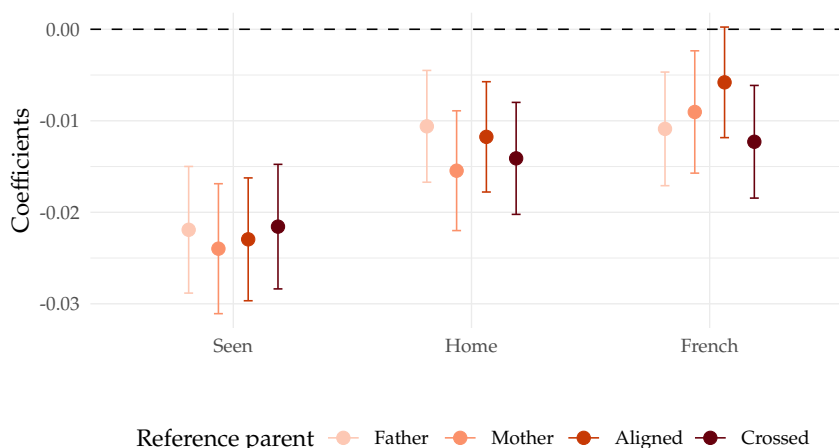
Figure 5 addresses the first concern by considering alternative constructions of parental cultural shock. Instead of averaging shocks across both parents, we successively focus on the father's shock only, the mother's shock only, the same-gender parent (mother for daughters and father for sons), and the opposite-gender parent. Across these alternative definitions, the estimated coefficients remain negative and statistically significant for most specifications and outcomes.¹² This suggests that our findings are not driven by the particular way in which parental shocks are combined in the baseline specification, although the estimates are slightly less precise for the outcome "Feels French" when the gender of the reference parent is aligned to the gender of the respondent.

an asinh transformation to our main regressor, cultural distance. As shown in Table B.1 of Appendix B, our main results remain unchanged across these alternative specifications.

¹¹In 92% of cases where both parents are foreign-born, they share the same country of birth. This corresponds to 4,220 out of 4,611 individuals. Restricting the sample to this subgroup yields qualitatively similar results, although the coefficients are somewhat smaller in magnitude. This additional exercise is reported in Appendix Table B.3.

¹²Across all these specifications, fixed-effects are adapted to the relevant parent.

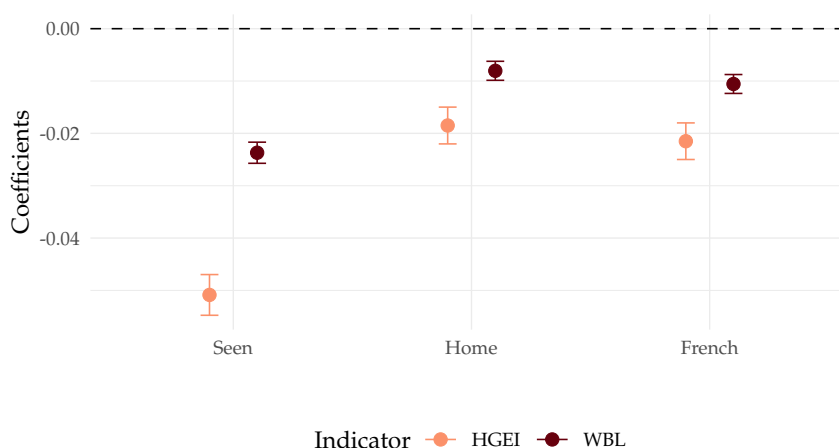
Figure 5: Alternative constructions of the Cultural shock



Notes: Confidence intervals are at the 5% level. Estimated through Linear Probability Models with controls and fixed effects alternatively for the father, the mother, the same gender parent, and the opposite gender parent.

We next assess whether the results depend on the exact definition of gender-norm distance itself. First, in Appendix Table B.2, we replace the absolute distance used in the baseline with a signed measure that allows the direction of the gap relative to France to matter. The results remain largely unchanged, indicating that our findings do not simply reflect the choice to impose symmetry between countries that are more conservative and those that are more progressive than France. Second, we reconstruct cultural shock using the World Bank's *Women, Business and the Law* index instead of the Historical Gender Equality Index.¹³ As shown in Figure 6, the estimated effects remain negative and statistically significant for all three belonging outcomes, despite differences in coverage and scale across the two indicators. Especially, the difference in coefficient size is explained by the difference in unit between both indicators.

Figure 6: Results with WBL and HGEI indicators



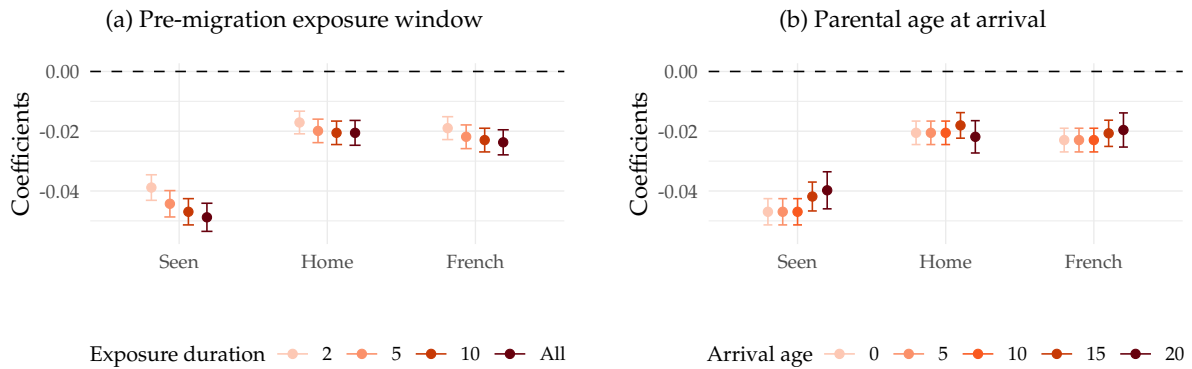
Notes: Confidence intervals are at the 5% level. Estimated through Linear Probability Models with controls and paternal fixed effects as in Column (4) of Table 2. Impact of the cultural shock of parents on individuals' sense of belonging when gender norms are captured through HGEI (main specification) or WBL datasets.

Finally, we examine whether our results are sensitive to the temporal assumptions embedded in the construction of parental cultural shock. In the baseline, parental exposure to origin-country gender norms is averaged over the ten years preceding migration. Figure 7a shows that the results remain robust when

¹³See Appendix C.1 for a complete discussion.

this exposure window is shortened to two or five years, or instead extended to all pre-migration years observed in the origin country. If anything, the estimated coefficients become larger in magnitude when longer exposure windows are considered, consistent with the idea that longer exposure to origin-country norms strengthens subsequent intergenerational transmission. A related concern is that some parents may have migrated to France at very young ages and therefore may not have been sufficiently exposed to the gender norms prevailing in their country of origin before migration. Figure 7b addresses this issue by successively restricting the sample to parents who arrived after ages 0, 5, 10, 15, and 20. Reassuringly, the sign and statistical significance of the estimates remain stable across these alternative thresholds.

Figure 7: Robustness to alternative temporal constructions of parental cultural shock



Notes: Confidence intervals are at the 5% level. Estimates are obtained using linear probability models with individual controls and paternal fixed effects, as in Column (4) of Table 2. Panel A reports the estimated effect of parental cultural shock when exposure to origin-country gender norms is measured over 2 years, 5 years, 10 years (the main specification), or all pre-migration years. Panel B reports the estimated effect when restricting the sample to respondents whose parents arrived in France after ages 0, 5, 10 (the main specification), 15, and 20.

5.2 Robustness to alternative definitions of subjective integration

We next examine whether our findings depend on how subjective integration is measured. In the baseline specification, each outcome is coded as equal to one only for respondents reporting a *total* sense of belonging. This coding follows existing work using TeO data (Baudin *et al.*, 2025). A natural concern, however, is that grouping together respondents who feel “rather” French and those who feel “absolutely not” French may be too restrictive. We therefore adopt a less demanding alternative coding in which both “totally” and “rather” are coded as one, whereas “rather not” and “absolutely not” are coded as zero. As shown in Panel A of Table 4, the estimated effect of parental cultural shock remains negative and statistically significant under this alternative coding. The coefficients are nevertheless smaller in magnitude, which is unsurprising given the strong concentration of responses in the top two categories. For instance, 95% of the sample reports feeling either rather or totally at home in France. Figure 2 shows that the same pattern holds for feeling French, and to a lesser extent for feeling seen as French. By aggregating the two most positive response categories, the alternative coding mechanically reduces the variation in the dependent variables, which in turn attenuates the estimated coefficients.

We also assess the sensitivity of our results to item non-response. Around 3% of respondents (roughly 200 individuals) do not answer the questions on sense of belonging, and this non-response may be non-random. To bound its potential influence, we re-estimate our baseline specification under two extreme assumptions:

first, treating all non-respondents as if they had answered “no,” and second, treating them as if they had answered “yes.” Panel B of Table 4 shows that the results remain negative and statistically significant under both assumptions, suggesting that selective non-response is unlikely to account for our main findings.

Table 4: Robustness to alternative definitions of subjective integration

	Seen as French (1)	Feels at home in France (2)	Feels French (3)
Panel A. Alternative coding of the outcome			
Rather or totally = 1	-0.036*** (0.002)	-0.004*** (0.001)	-0.004** (0.001)
Observations	7,669	7,669	7,669
Panel B. Alternative treatment of non-response			
Non-response treated as “No”	-0.051*** (0.003)	-0.018*** (0.003)	-0.021*** (0.002)
Non-response treated as “Yes”	-0.049*** (0.003)	-0.019*** (0.002)	-0.021*** (0.002)
Observations	7,917	7,917	7,917
Baseline controls & FE	✓	✓	✓

Notes: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. Standard errors clustered at the département level are reported in parentheses. Estimates are obtained using linear probability models with the individual controls and paternal fixed effects from Column (4) of Table 2. In Panel A, the dependent variable is recoded so that both “totally” and “rather” are coded as one, while “rather not” and “absolutely not” are coded as zero. In Panel B, non-respondents are alternatively treated as if they had answered “No” or “Yes” to the relevant belonging question.

5.3 Placebo cultural shocks

5.3.1 Post-migration cultural shock

Table 5: Robustness to post-migration cultural distance

	Seen as French (1)	Feels at home in France (2)	Feels French (3)
Cult.shock _t	-0.032*** (0.005)	-0.012** (0.005)	-0.015*** (0.005)
Cult.shock _{t+10}	-0.012** (0.005)	-0.008* (0.004)	-0.005 (0.005)
Observations	7,635	7,635	7,635
Baseline controls & FE	✓	✓	✓

Notes: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. Standard errors clustered at the département level are reported in parentheses. Estimates are obtained using linear probability models with the individual controls and paternal fixed effects from Column (4) of Table 2. Compared to our main specification, we loose observations because HGEI data stop in 2003.

To assess the importance of the timing of parental cultural shock, we compare the cultural shocks at migration year to an alternative measure of cultural distance computed over the ten years following migration¹⁴. We show that cultural distance between the origin country and France after migration attenuates the magnitude

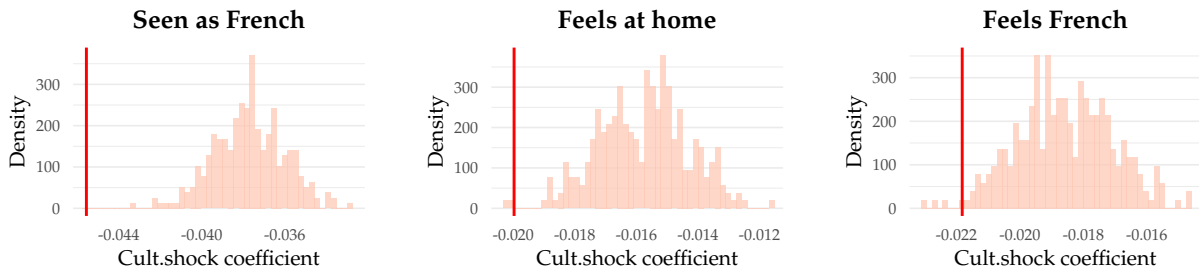
¹⁴ $EGN_{o,t}^{10 \text{ years post-mig}} = \frac{1}{10} \times \sum_t^{t+10} HGEI_{o,t}$. The remainder of the procedure for deriving *Cult.shock* is left unchanged.

of migration-shock coefficients, but does not threaten their significance. Post-migration cultural distance seems to still play a role on the external dimension of subjective integration (Seen as French), consistent with an exacerbation of the discrimination feeling. Other aspects of sense of belonging are not influenced by this placebo shock.

5.3.2 Randomization of migration years

The measure of cultural shock, in the way it is computed in this paper, relies on the migration years of parents. To examine even more precisely than Section 5.3.1 whether this precise timing is the one influencing the results, we proceed to a permutation in the migration years of parents. Keeping the sample and covariates unchanged, we randomly reshuffle maternal and paternal migration years across respondents, within each origin country. Cultural shock is recomputed for each second-generation respondents, following the same procedure as presented in Section 2.3. The placebo cultural shock is then integrated in the baseline specification to get the β coefficient. Reiterating the procedure 300 times, we get a placebo distribution of coefficients presented in Figure 8. We notice that the distributions are not centered around zero, suggesting the presence of country-specific factors that influence integration outcomes independently of migration timing. However, for the three subjective integration outcomes, the real coefficient, presented through a red line, lies in the extreme left tail of the distributions. This confirms that the estimated relationship is specific to the actual pairing between origin country and migration year, and cannot be attributed solely to systematic differences across origin countries.

Figure 8: Robustness to randomization of migration years



5.4 Controlling for segregation

Selection bias may also arise from residential choices made upon arrival in France. Because immigrants choose where to live, segregation could correlate with both the sense of belonging and the parents' cultural shock, leading to omitted variable bias. We proxy segregation using ethnic networks, defining an individual as segregated if they declare that more than half of their friends share a common origin country. Including this ethnic network dummy as a control in our main specification produces the results presented in Table 6, consistent with those of Table 2. These results suggest that the impact of parental cultural shock is not driven by the composition of one's social network. Notably, the ethnic network shows a positive association with the probability of feeling perceived as French, but a negative association with feeling at home in France. Arguably, others' perception partly includes friends. While friends of the same origin may readily

acknowledge the individual’s French identity, constant immersion in these networks may simultaneously reinforce a connection to their country of origin rather than fostering a personal sense of belonging in France.

Table 6: Controlling for segregation

	Seen as French (1)	Feels at home in France (2)	Feels French (3)
Cult.shock	-0.044*** (0.003)	-0.019*** (0.003)	-0.019*** (0.003)
Ethnic network	0.061*** (0.001)	-0.026* (0.001)	-0.006 (0.001)
Observations	6,308	6,308	6,308
Baseline controls & FE	✓	✓	✓

Notes: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. Standard errors clustered at the département level are reported in parentheses. Estimates are obtained using linear probability models with the individual controls and paternal fixed effects from Column (4) of Table 2, adding a control for segregation. We proxy segregation through a dummy equal 1 if more than half of friends are from same origin than respondent.

6 Mechanisms

In this section, we investigate the mechanisms through which parental cultural shock at arrival may affect their children’s subjective integration decades later. We first document a gender-attitudes channel: greater cultural shock at arrival is associated with more conservative views regarding women’s rights among both first- and second-generation migrants, and these attitudes are in turn predictive of respondents’ sense of belonging. We then turn to a set of competing explanations and find little support for them. In particular, our results do not appear to operate through labor-market integration, nor are they explained by other dimensions of distance at arrival, such as differences in GDP per capita, institutional quality, or democracy.¹⁵ Finally, parental economic hardship during respondents’ teenage years does not account for the decline in sense of belonging that we estimate.

6.1 Progressive attitudes across generations of immigrants

A central implication of our framework is that parental cultural shock at arrival affects their children’s later sense of belonging through the intergenerational transmission of gender-related attitudes. To evaluate this mechanism, we first examine whether greater gender-norm distance at arrival is associated with more conservative views regarding women’s rights among first-generation migrants, and then whether these differences are also visible among their children.

Ideally, we would directly observe whether the cultural distance faced at arrival in France shaped the gender attitudes of the parents of our second-generation respondents. This is not possible in TeO, since these questions were not asked to respondents’ parents. We therefore rely on two attitudinal proxies available in TeO. The first captures views on gender equality in access to employment through the statement: “When

¹⁵In Appendix D.2, we also show that among the first generation of migrants, subjective integration is not negatively shaped by the cultural distance they faced at arrival what suggests that a direct transmission of the sense of belonging is not a plausible mechanism.

there is little work, men have more right to a job than women.” We code respondents as holding a progressive view if they answer “do not agree at all,” and zero otherwise. The second proxy concerns abortion rights, based on the statement: “A woman may have an abortion for non-medical reasons.” In this case, respondents are coded as progressive if they answer “totally agree,” and zero otherwise. These questions are available only in TeO2.

To study the first-generation mechanism, we focus on immigrants born in the same years and arriving in the same migration cohorts as the parents of our second-generation respondents. We further restrict the sample to individuals who are themselves parents, that is, who have at least one child at the time of the survey, and who arrived in France after age 10. Using this alternative sample, we estimate the same specification as in Section 3, replacing the dependent variable with each of the attitudinal measures described above. Table 7-Panel A shows that greater cultural distance at arrival predicts less progressive views among first-generation migrants regarding abortion rights at the time of the TeO interview. By contrast, we find no significant effect on views regarding gender equality in access to employment.

We next replicate the same exercise for second-generation migrants. Here again, greater cultural distance at the time of parents’ arrival predicts less progressive attitudes toward abortion rights, while no significant effect is found for views on gender equality in access to employment.

Finally, Panel B of Table 7 shows that, among second-generation respondents, progressive gender attitudes are themselves strongly associated with subjective integration. In particular, more favorable views toward abortion rights are strongly predictive of a greater sense of belonging to France. Taken together, these results support the view that one important channel linking parental cultural shock at arrival to the later subjective integration of their children operates through the intergenerational transmission of gender-related attitudes.

Table 7: Mechanism evidence: cultural shock, progressive attitudes, and sense of belonging

	First generation		Second generation				
	Work priority (1)	Abortion right (2)	Work priority (3)	Abortion right (4)			
Panel A. Cultural shock and progressive attitudes							
Cult. shock	0.002 (0.002)	-0.006** (0.003)	-0.004 (0.003)	-0.019*** (0.005)			
Observations	5,692	5,559	4,390	4,296			
	Work priority			Abortion right			
	Seen as French (5)	Feels at home (6)	Feels French (7)	Seen as French (8)	Feels at home (9)	Feels French (10)	
Panel B. Progressive attitudes and sense of belonging (second generation)							
Progressive attitude	0.078*** (0.018)	0.047** (0.022)	0.064*** (0.019)	0.110*** (0.018)	0.092*** (0.017)	0.079*** (0.013)	
Observations	4,390	4,390	4,390	4,296	4,296	4,296	

Notes: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. Standard errors clustered at the département level are reported in parentheses. All specifications are estimated using linear probability models with the individual controls and paternal fixed effects from Column (4) of Table 2. In Panel A, the dependent variables are indicators for progressive attitudes toward gender equality in access to employment (“When there is little work, men have more right to a job than women”) and abortion rights (“A woman may have an abortion for non-medical reasons”). In Panel B, the explanatory variable is the corresponding progressive-attitude indicator, and the dependent variables are the three measures of subjective integration.

6.2 Other dimensions of distance at arrival

Although this paper focuses on gender norms, migrants' distance from the host society at arrival may also be salient along other cultural, institutional, or economic dimensions. We therefore examine whether the relationship documented in our baseline results is specific to gender norms or instead reflects broader differences between origin and destination countries. To do so, we construct alternative measures of distance at arrival using the same methodology as for our baseline measure.

Table 8: Other dimensions of distance at arrival

Panel A. Religious distance				Panel B. Freedom-of-expression distance			
	Seen as French (1)	Feels at home (2)	Feels French (3)		Seen as French (4)	Feels at home (5)	Feels French (6)
Religious dist. alone	-0.179*** (0.013)	-0.067*** (0.011)	-0.085*** (0.011)	Freedom dist. alone	-0.608*** (0.043)	-0.238*** (0.037)	-0.308*** (0.038)
Gender-norm dist.	-0.028*** (0.005)	-0.020*** (0.004)	-0.014** (0.004)	Gender-norm dist.	-0.032*** (0.005)	-0.017*** (0.004)	-0.013*** (0.004)
Religious dist.	-0.084*** (0.020)	0.001 (0.016)	-0.038** (0.017)	Freedom dist.	-0.265*** (0.065)	-0.049 (0.053)	-0.165*** (0.057)
Observations	5,760	5,760	5,760	Observations	6,439	6,439	6,439

Panel C. GDP-per-capita distance				Panel D. All distances included jointly			
	Seen as French (7)	Feels at home (8)	Feels French (9)		Seen as French (10)	Feels at home (11)	Feels French (12)
GDP p.c. dist. alone	-0.029*** (0.002)	-0.012*** (0.002)	-0.012*** (0.002)	Gender-norm dist.	-0.019*** (0.006)	-0.015*** (0.005)	-0.013** (0.006)
Gender-norm dist.	-0.023*** (0.005)	-0.009** (0.005)	-0.016*** (0.005)	Freedom dist.	-0.053 (0.105)	0.109 (0.086)	-0.031 (0.098)
GDP p.c. dist.	-0.018*** (0.003)	-0.008*** (0.003)	-0.005* (0.003)	GDP p.c. dist.	-0.013*** (0.004)	-0.012*** (0.003)	-0.001 (0.003)
				Religious dist.	-0.021 (0.027)	0.034* (0.021)	-0.025 (0.023)
Observations	5,389	5,389	5,389	Observations	4,712	4,712	4,712

Notes: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. Standard errors clustered at the département level are reported in parentheses. All specifications are estimated using linear probability models with the individual controls and paternal fixed effects from Column (4) of Table 2. In Panels A–C, the first line reports the coefficient on the alternative distance measure when considered separately; the second and third lines report the coefficients obtained when the alternative distance measure is included jointly with gender-norm distance. Panel D reports the specification including all four distance measures simultaneously.

We begin with religiosity. Using data from the Religious Characteristics of States Dataset Project – Demographics (RCS-Dem 2.0), we construct a measure of religious distance at arrival based on the difference between the prevalence of atheism in the origin country over the ten years preceding migration and the level prevailing in France at the time of arrival. Table 8, Panel A, shows that this parental religious distance is also negatively associated with the subjective integration of the second generation. However, when religious distance and gender-norm distance are included jointly in the same specification, the coefficient on gender-norm distance declines somewhat in magnitude but remains highly statistically significant. This

suggests that part of the effect captured by our baseline measure reflects the close connection between gender norms and religiosity, while also indicating that our main result is not reducible to religious distance alone.

We then perform the same exercise for other dimensions of distance at arrival. Using the V-Dem database¹⁶, we construct an institutional distance measure based on differences between the origin country and France in freedom of expression, and we complement it with an economic distance measure based on GDP per capita¹⁷. Panels B and C from Table 8 show that both measures are negatively associated with the subjective integration of second-generation migrants when considered separately. When entered jointly with gender-norm distance, however, these alternative measures do not displace the effect of gender norms.

Finally, we estimate a specification that includes all four distance measures simultaneously¹⁸. Interestingly, among the cultural dimensions we consider, only gender-norm distance remains statistically significant, while religiosity and freedom-of-expression distance become insignificant. GDP-per-capita distance remains significant for some outcomes, but among the non-economic dimensions, gender norms clearly emerge as the most robust predictor of intergenerational persistence in subjective integration.

6.3 Objective integration channels

We next investigate whether parental cultural shock at arrival affects subjective integration through more objective channels, particularly labor-market integration. Two mechanisms are plausible. First, greater cultural distance at arrival may have generated more difficult labor-market trajectories for first-generation migrants. If respondents were exposed to these difficulties while growing up—for example through parental occupational downgrading or persistent economic disadvantage—their own sense of belonging may have been durably affected. Second, parental cultural shock may also be associated with weaker labor-market integration among second-generation respondents themselves, which could then depress subjective integration independently of any direct transmission of cultural attitudes.

We proxy the economic difficulties faced by parents through labor-market skills downgrading. The underlying idea is that parental occupational mismatch after arrival in France may have made social exclusion or downward mobility visible within the family environment. Children exposed to such situations while growing up may have interpreted them as a sign of discrimination, blocked mobility, or incomplete integration, which could in turn weaken their own sense of belonging. We measure parental labor-market downgrading using occupation–education mismatch.

TeO provides information on parental occupation when the respondent was 15 years old. Using the French Labor Force Surveys from 1982 onwards, we compute the yearly modal level of education for each socio-professional category. This allows us to construct a time-varying measure of the education level typically associated with each occupation. We then classify parents as overqualified if their years of schooling exceed the modal attainment for their occupation in the year when their child turned 15. Because occupational classifications change substantially over time, we exclude from this analysis respondents who had reached age 15 before 1982. As shown in Appendix Figure D.2, modal education levels vary across occupations and over time, which justifies the use of a dynamic mismatch measure.

¹⁶V-Dem Dataset provides various aggregated and sub-indicators of governance and institutions' quality.

¹⁷We rely on GDP data from the Pew Research Center.

¹⁸Note that all measures present non-negligible levels of correlation (*cf.* Figure D.1)

Table 9: Objective integration channels: parental downgrading and second-generation labor-market outcomes

	Overqualified mother			Overqualified father		
	Seen as French (1)	Feels at home (2)	Feels French (3)	Seen as French (4)	Feels at home (5)	Feels French (6)
Panel A. Parental occupational downgrading and sense of belonging						
Cult. shock	-0.041*** (0.005)	-0.016*** (0.005)	-0.018*** (0.005)	-0.039*** (0.004)	-0.017*** (0.004)	-0.018*** (0.003)
Overqualified parent	-0.031 (0.027)	0.020 (0.032)	-0.021 (0.024)	-0.035 (0.029)	0.021 (0.028)	-0.009 (0.030)
Cult. shock × overqual. parent	0.001 (0.004)	-0.007 (0.006)	0.003 (0.005)	0.001 (0.004)	-0.002 (0.004)	0.003 (0.004)
Observations	4,262	4,262	4,262	6,675	6,675	6,675
Baseline controls & FE	✓	✓	✓	✓	✓	✓
Parental education	✓	✓	✓	✓	✓	✓
		Income (7)	Employment (8)	Permanent contract (9)		
Panel B. Parental cultural shock and respondents' labor-market outcomes						
Cult. shock		-10.850 (7.335)	0.000 (0.003)	-0.001 (0.003)		
Observations		4,335	7,014	7,014		
Baseline controls & FE		✓	✓	✓		

Notes: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. Standard errors clustered at the département level are reported in parentheses. All specifications are estimated using linear probability models with the individual controls and paternal fixed effects from Column (4) of Table 2. Panel A reports the effect of parental cultural shock, parental overqualification, and their interaction on respondents' sense of belonging. Columns (1)–(3) use a dummy for overqualified mothers, while Columns (4)–(6) use a dummy for overqualified fathers. We additionally control for both parents' years of schooling. Panel B reports the effect of parental cultural shock on respondents' monthly income, employment status, and the probability of holding a permanent contract. Income is observed only in TeO2.

We then re-estimate our baseline specification including parental occupation–education mismatch, as well as an interaction between mismatch and parental cultural shock, to test whether labor-market downgrading constitutes an independent channel or amplifies the effect of cultural shock on subjective integration.

Table 9-Panel A shows that parental labor-market downgrading has no statistically significant effect on respondents' sense of belonging once cultural distance is included in the specification. Individuals whose father or mother was overqualified are no less likely than their peers to report feeling totally at home in France. We additionally control for both parents' years of schooling, since more highly educated individuals are mechanically more exposed to overqualification. The interaction between economic and cultural shocks is likewise small and statistically insignificant, indicating that parental labor-market downgrading does not amplify the effect of cultural distance.

We next consider our second objective channel, namely the possibility that parental cultural shock at arrival translated into weaker labor-market integration among second-generation respondents themselves, which could in turn reduce their subjective integration. The second wave of TeO provides detailed information on employment status, contract type, and monthly earnings. Using the same specification as in Column (4) of Table 2, we estimate the effect of parental gender-norm distance on monthly income, the probability of being employed, and the probability of holding a permanent contract. To ensure that this analysis pertains to the

active population and excludes individuals still in education, we restrict the sample to respondents aged 25 and above.

Table 9-Panel B provides no evidence that parental cultural shock is associated with these labor-market outcomes. The estimated effect on monthly earnings is negative but statistically insignificant, while the coefficients for employment and permanent-contract status are small and not statistically different from zero.

Taken together, our findings suggest that the relationship documented in Table 2 is unlikely to operate primarily through economic integration. Greater parental cultural shock at arrival is associated with a weaker sense of belonging among the second generation, but not with systematically worse labor-market outcomes. This strengthens the interpretation that the main effect we identify is predominantly cultural rather than economic in nature.

7 Discussion

We conclude our empirical analysis by addressing two related issues raised by our main findings. First, if cultural distance at arrival in gender norms shapes the subjective integration of the children of migrants, an important question is whether this weaker sense of belonging to France is accompanied by stronger attachment to the origin country, pointing to a form of separation rather than acculturation. Second, the effect of cultural distance may depend on the way migrants and their children are received in the host society. In particular, experiences of racism may either reinforce or mitigate the relationship between parental cultural shock and subjective integration.

7.1 Sense of belonging to the origin country

We have shown that transmitted cultural shock significantly affects respondents' subjective integration in France. A weaker sense of belonging to France, however, does not necessarily imply a stronger attachment to the origin country. To examine this issue, we study whether parental gender-norm distance also shapes respondents' attachment to their parents' country of origin.

We rely on two measures available in TeO. The first captures origin-based identity: respondents are asked what best defines them, and we code the dependent variable as one when a second-generation respondent explicitly mentions their origin as part of their self-identification, and zero otherwise (Column (1) of Table 10). The second measure captures belonging to the parental origin country. In parallel to the questions asked about France, respondents are asked whether they feel that they belong to their mother's or father's country of origin. For example, respondents with a mother born in Portugal are asked whether they feel Portuguese. We code the dependent variable as one when respondents report belonging "totally" to the country of origin of either parent, and zero otherwise (Column (2) of Table 10). Compared with the belonging measure, the identity question more directly captures the characteristics respondents associate with themselves.

Table 10 shows that greater parental cultural distance increases both the probability of identifying with the origin and the probability of reporting a strong sense of belonging to the parental origin country. These results suggest that when parents originate from more culturally distant societies, their children maintain a

stronger attachment to their ancestral background. In the terminology of Berry (1997), this pattern is more consistent with a form of separation than with marginalization: weaker attachment to the host society is accompanied by a stronger orientation toward the culture of origin rather than by weak attachment to both.

Table 10: Additional evidence on origin attachment and perceived discrimination

	Attachment to origin		Sense of belonging to France		
	Origin identity	Belonging to origin	Seen as French	Feels at home in France	Feels French
	(1)	(2)	(3)	(4)	(5)
Cult. shock	0.019*** (0.002)	0.020*** (0.002)	-0.027*** (0.004)	-0.007* (0.004)	-0.012*** (0.003)
Perceived racism or discrimination			-0.167*** (0.027)	-0.042 (0.028)	-0.059** (0.027)
Cult. shock × perceived racism			-0.014*** (0.004)	-0.011*** (0.004)	-0.006* (0.003)
Observations	7,669	7,669	7,664	7,664	7,664
Baseline controls & FE	✓	✓	✓	✓	✓

Notes: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. Standard errors clustered at the département level are reported in parentheses. All specifications are estimated using linear probability models with the individual controls and paternal fixed effects from Column (4) of Table 2. Columns (1) and (2) report the effect of parental cultural shock on the probability of using origin as a self-identifier and on the probability of reporting a total sense of belonging to the parental origin group. Columns (3) to (5) report the effect of parental cultural shock, perceived racism or discrimination, and their interaction on respondents' sense of belonging to France.

7.2 Perceived racism and discrimination

The effects we estimate may depend not only on the behavior and characteristics of immigrant families, but also on the way second-generation immigrants are received in the host society. To capture this dimension, we exploit information in TeO on whether respondents report having experienced racism or discrimination during the five years preceding the survey. We include this perceived-racism indicator in our baseline specification and interact it with parental cultural shock in order to examine whether adverse experiences in the host society amplify the effect of cultural distance on subjective integration.

Table 10 shows that the interaction terms are negative and significant across all three indicators of subjective integration, suggesting that perceived racism strengthens the negative effect of parental cultural shock. The estimated amplification is particularly pronounced for the more external dimension of belonging, namely feeling seen as French, although it is also present for the more internal dimensions captured by feeling at home in France and feeling French. Taken together, these results suggest that the reception context plays an important role: when second-generation immigrants perceive racism or discrimination, the effect of cultural distance inherited from their parents becomes more detrimental to their sense of belonging.

Conclusion

This paper studies whether the cultural distance faced by migrants upon arrival has long-run consequences for the subjective integration of their children. Focusing on migration to France and measuring cultural

distance through differences in gender norms between origin countries and France at the time of migration, we show that greater parental cultural shock at arrival is associated with a weaker sense of belonging to France among the second generation. This result is robust to a wide range of alternative specifications, definitions, and sample restrictions.

Our findings contribute to the literature in three main ways. First, they show the value of opening the black box of culture. Rather than relying on broad and time-invariant country-level proxies, we focus on a specific and historically evolving dimension of culture—gender norms—and on the distance between origin and destination precisely at the time of migration. This approach makes it possible to move beyond fixed notions of cultural background and to capture the fact that the same origin country may imply very different forms of cultural distance depending on when migration occurs. Second, the paper highlights the importance of subjective integration as a distinct outcome. While a growing literature studies labor-market, educational, or institutional dimensions of integration, our results suggest that cultural distance may leave a particularly persistent imprint on how the children of migrants feel, identify, and perceive their place in the host society. Third, among the alternative dimensions of distance that we consider, gender norms emerge as the most robust cultural predictor of subjective integration.

The evidence also sheds light on the mechanisms underlying this relationship. We show that greater parental cultural shock at arrival is associated with less progressive attitudes toward women's rights among both first- and second-generation migrants, and that these attitudes are themselves strongly predictive of respondents' sense of belonging. By contrast, we find little support for the claim that our results are primarily driven by more objective integration channels, such as parental occupational downgrading or weaker labor-market outcomes among the second generation. We further show that weaker attachment to France is accompanied by stronger attachment to the parental origin country, a pattern more consistent with separation than with marginalization. Finally, perceived racism and discrimination amplify the negative association between parental cultural shock and subjective integration, underlining the importance of the reception context.

Taken together, these results suggest that the long-run integration of migrants' children depends not only on where their parents came from, but also on the normative gap they faced when they arrived. In the French case at least, gender norms appear to constitute a particularly salient dimension of this gap. More broadly, the paper points to the importance of understanding integration as a process shaped jointly by intergenerational cultural transmission and by the way migrants and their children are received in the host society. Future research could usefully examine whether similar mechanisms operate in other destination countries, or along other dimensions of culture, in order to better understand when and how cultural distance at arrival leaves persistent intergenerational traces.

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Appendix

A Data

Figure A.1: Number of observations by origin country (considering mothers)

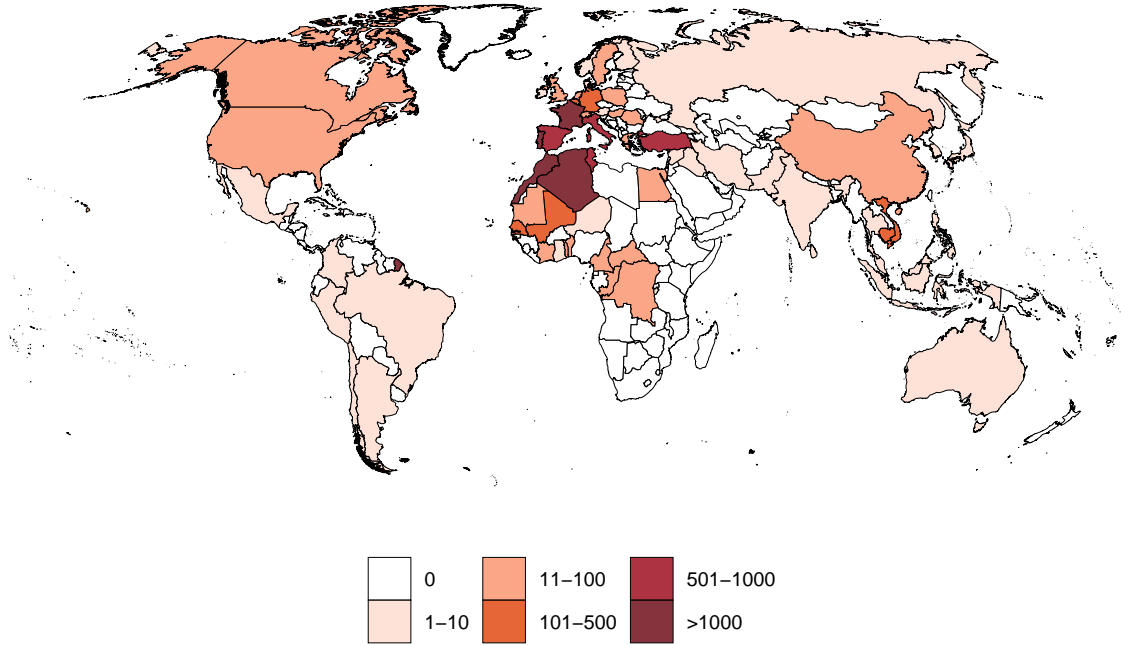


Figure A.2: Answers of natives to indicators of belonging

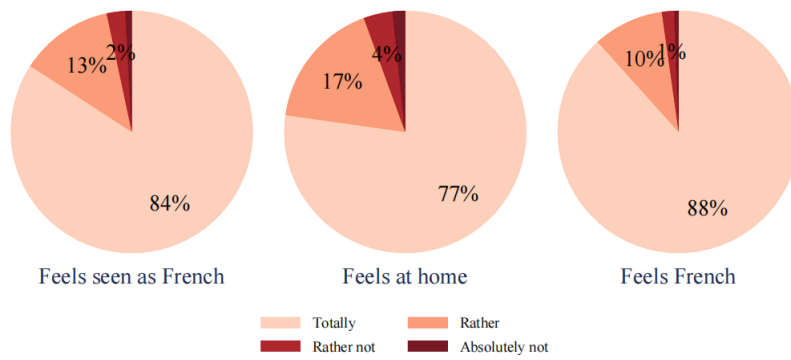


Figure A.3: Answers of 1st generation immigrants to indicators of belonging

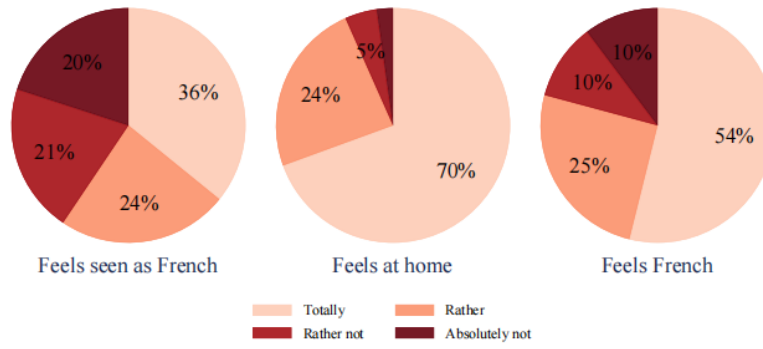


Figure A.4: Share of individuals from each origin with the maximum sense of belonging

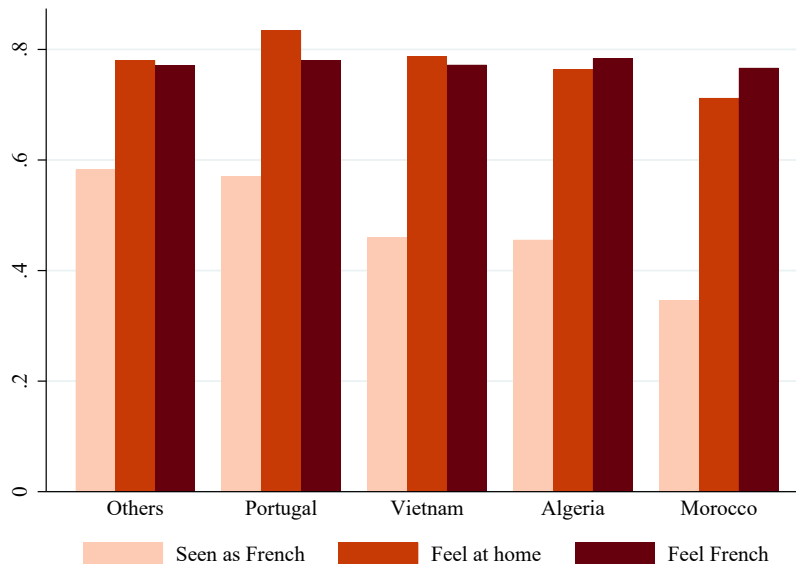


Figure A.5: HGEI for France and all other countries (1950-2003)

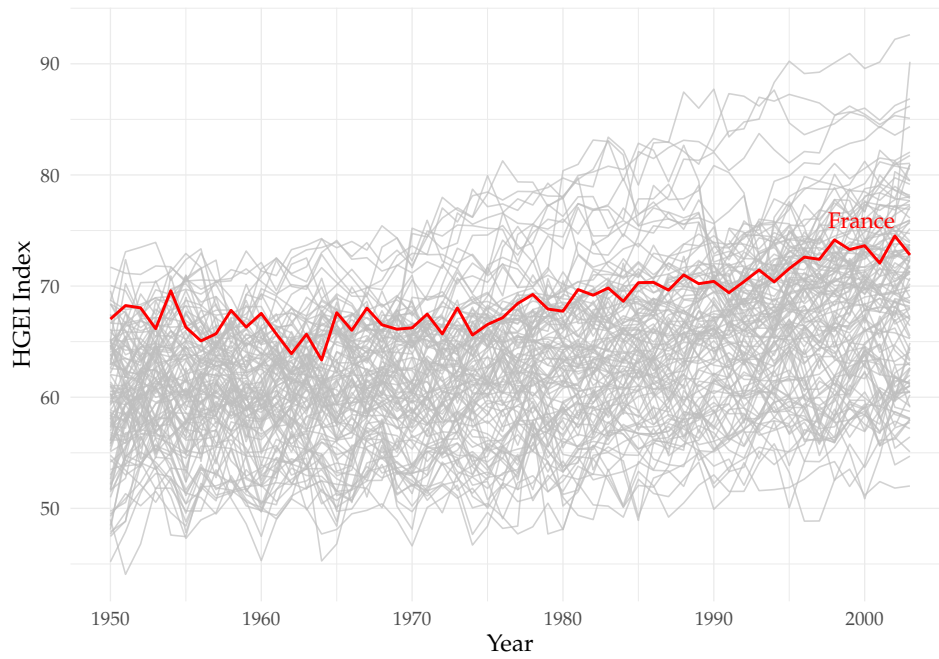


Figure A.6: Distance in HGEI between France and main origin countries (1950-2003)

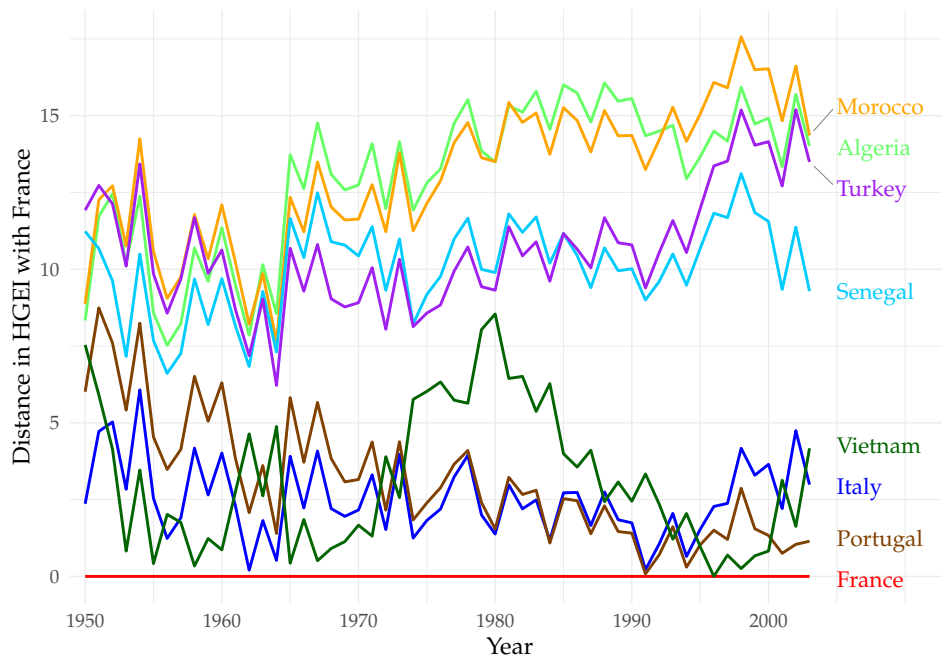


Figure A.7: Arrival cohorts of parents (1950-2003)

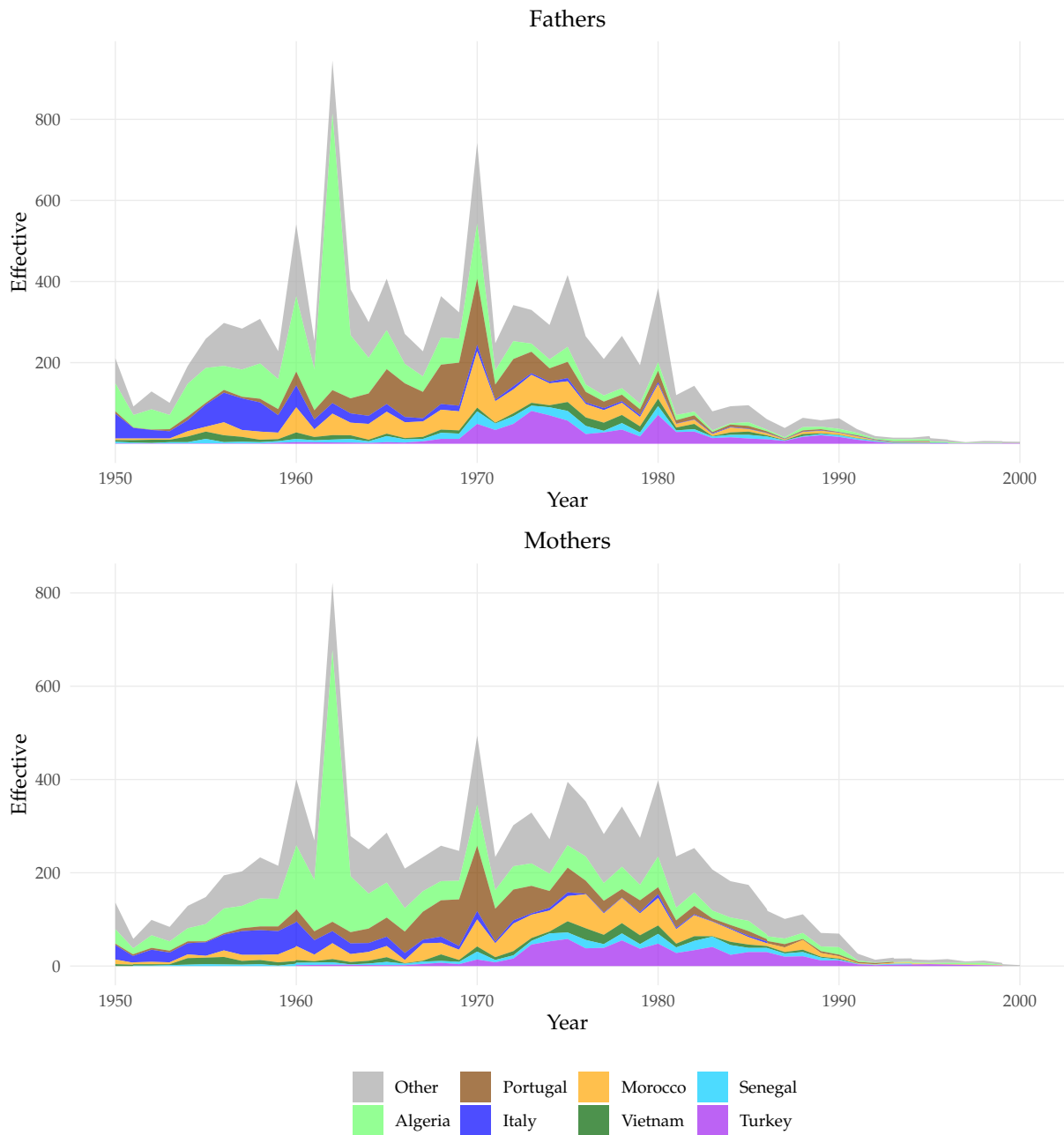


Table A.1: Annual migration flows and cultural shock

	Inflow _{ot}
Cult.shock _{ot}	-1.38* (0.74)
Country FE	✓
Mig.year FE	✓
Num.obs.	1 337

B Results

Table B.1: Alternative functional forms

	(1)	(2)	(3)
	Seen as French	Feels at home in France	Feels French
Panel A. Logit estimates (odds ratios)			
Cult. shock	0.809*** (0.014)	0.899*** (0.017)	0.882*** (0.015)
Controls & FE	✓	✓	✓
Observations	7,669	7,669	7,669
Panel B. Asinh transformation of cultural shock			
asinh(<i>Cult. shock</i>)	-0.169*** (0.015)	-0.058*** (0.015)	-0.064*** (0.012)
Controls & FE	✓	✓	✓
Observations	7,669	7,669	7,669

Notes: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. Standard errors clustered at the département level are reported in parentheses. All specifications include individual controls and paternal fixed effects, as in Column (4) of Table 2. Panel A reports odds ratios from logit models. Panel B reports estimates obtained when applying an inverse hyperbolic sine transformation to the parental cultural shock variable. The dependent variables are the probability of feeling seen as French (Column (1)), feeling at home in France (Column (2)), and feeling French (Column (3)).

Table B.2: Cultural difference instead of cultural distance

	Seen as French	Feels at home in France	Feels French
	(1)	(2)	(3)
Cult. difference	-0.040*** (0.002)	-0.018*** (0.002)	-0.018*** (0.002)
Baseline controls & FE	✓	✓	✓
Observations	7,669	7,669	7,669

Notes: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. Standard errors clustered at the département level are reported in parentheses. Estimates are obtained using a linear probability model with the individual controls and paternal fixed effects from Column (4) of Table 2. The cultural shock measure is constructed without taking absolute values, so that it can take negative values for respondents whose parents originate from countries with more gender-equal norms than France.

Figure B.1: Correlation matrix between subjective and objective integration indicators

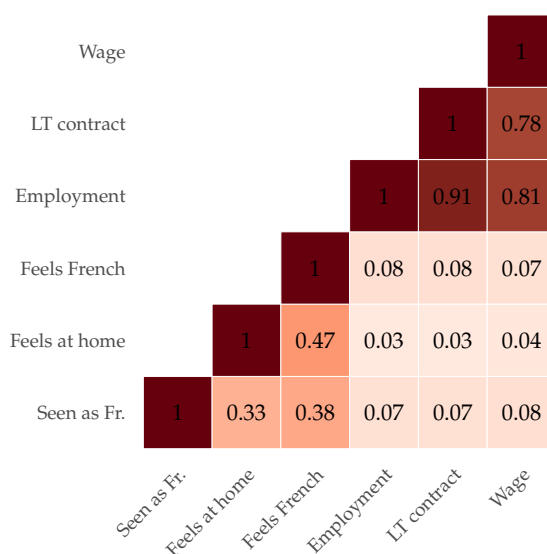


Table B.3: Restriction to respondents whose parents share the same country of origin

	Seen as French (1)	Feels at home in France (2)	Feels French (3)
Cult. shock	-0.018*** (0.006)	-0.010** (0.004)	-0.010* (0.006)
Baseline controls & FE	✓	✓	✓
Observations	4,220	4,220	4,220

Notes: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. Standard errors clustered at the département level are reported in parentheses. Estimates are obtained using a linear probability model with the individual controls and paternal fixed effects from Column (4) of Table 2. The table reports the effect of parental cultural shock on respondents' sense of belonging when both parents are born in the same country.

C Robustness

C.1 Other gender norms indicator

This paper relies on HGEI data in order to capture the worldwide state of gender norms in time. However, some other databases could have been used in this end. The World Bank provides a composite indicator on “Women, Business and the Law” (WBL) relying on their situation in terms of mobility (e.g. “Can a woman choose where to live in the same way as a man?”), workplace (e.g. “Can a woman get a job in the same way as a man?”), pay (e.g. “Does the law mandate equal remuneration for work of equal value?”), marriage (e.g. “Is the law free of legal provisions that require a married woman to obey her husband?”), parenthood (e.g. “Is paid leave of at least 14 weeks available to mothers?”), entrepreneurship (e.g. “Does the law prohibit discrimination in access to credit based on gender?”), assets (e.g. “Do women and men have equal ownership rights to immovable property?”), and pension (e.g. “Is the age at which women and men can retire with full pension benefits the same?”). Each of the six categories is rated on a scale from 0 to 100 depending on the state of the legislation. The average of the six categories is taken as the global WBL index, thus also ranging from 0 to 100. The World Bank computed this indicator for 190 countries worldwide, from 1971 to 2024. Note that, conversely to HGEI, the WBL indicators relies on the state of the law, which is known to further influence individual attitudes (Aksoy *et al.*, 2020). Figure C.1 reveals the quite dominant position of WBL index for France among all other countries and across time. Starting from slightly more than 50/100 in 1970, it reaches 100/100 starting from 2015. Because of the restricted time span it covers, WBL was not our first best option.

The variable $CultShock_{o,t}$ is created using the same methodology as the one proposed in Section 2.3. As WBL only starts in 1971 and in order not to lose too many observations, we impute the 1971 value to parents arrived between 1950 and 1970.

Table 6 presents the results obtained with WBL indicator. For the three outcomes of sense of belonging, sign and significance are the same for HGEI and WBL. The difference in coefficient size is explained by the difference in unit between both indicators.

C.2 Selective out-migration bias

We are able to observe in the sample only second-generation immigrants who stayed in France, potentially introducing a selection bias. Since our measure of cultural distance relies on gender norms, our estimates might be upwardly biased if individuals with more progressive attitudes are more likely to emigrate outside France. In such case, the sample would disproportionately represent the least progressive second-generation immigrants. To address this, we examine whether French-born individuals exhibit more progressive views when residing abroad compared to those who remain in France. We use five waves of the European Social Survey, from 2014 to 2023. We proxy progressive attitudes through respondent’s total agreement with the statement: ‘Gays and lesbians should live their life as they wish’. Although this item does not specifically address the status of women, it is the most consistent metric available across several ESS waves for capturing overall progressive opinions. We estimate the following equation among the sample of ESS respondents born in France:

$$Progressive_i = \alpha + \beta Expat_i + \gamma X_i + \epsilon_i$$

$Progressive_i$ is a dummy that identifies whether i responded ‘Totally agree’ or not to the item on gays and lesbians’ rights. $Expatriate_i$ is equal to 1 if the individual resides outside France, 0 if they were surveyed in France. Our coefficient of interest is β , as it captures the difference in probability to be identified as having progressive opinions between expatriates and French residents. X_i controls for individual characteristics such as gender, education and year of birth.

Appendix Table C.1 shows that there is no positive association between the probability of emigrating outside France and being progressive. Expatriates are 12 percentage points less likely to be progressive than French residents. These estimates lack strong statistical significance and may be subject to endogeneity, as we cannot demonstrate that expatriates were already less progressive prior to their departure. Nonetheless, these findings suggest that is highly improbable that the most progressive individuals are those who choose to emigrate. If anything, our main results likely represent lower bound estimates.

Table C.1: Association between expatriation and progressive attitudes

	Progressive	
	No control (1)	With controls (2)
Expatriate	-0.095 (0.065)	-0.123* (0.067)
Controls	✗	✓
Observations	9,156	9,127

Notes: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. Standard errors clustered at the country level are reported in parentheses. The table reports differences in progressive attitudes among individuals born in France between expatriates and French residents. $Expatriate = 1$ if the individual lives outside France. $Progressive = 1$ if the individual responds “totally agree” to the statement: “Gays and lesbians should live their life as they wish.” Controls in Column (2) include years of schooling, gender, and year of birth.

C.3 Other robustness

Table C.2: Controlling for parental education

	Seen as French (1)	Feels at home in France (2)	Feels French (3)
Cult. shock	-0.038*** (0.004)	-0.017*** (0.004)	-0.017*** (0.003)
Baseline controls & FE	✓	✓	✓
Parental education	✓	✓	✓
Observations	6,772	6,772	6,772

Notes: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. Standard errors clustered at the département level are reported in parentheses. Estimates are obtained using a linear probability model with the individual controls and paternal fixed effects from Column (4) of Table 2. The table reports the effect of parental cultural shock on respondents' sense of belonging when additionally controlling for the years of schooling of both mother and father.

Table C.3: Alternative clustering levels

	Seen as French (1)	Feels at home in France (2)	Feels French (3)
Panel A. Clustered at the father's country of origin			
Cult. shock	-0.043*** (0.005)	-0.018*** (0.002)	-0.019*** (0.003)
Panel B. Clustered at the father's year of arrival			
Cult. shock	-0.043*** (0.003)	-0.018*** (0.002)	-0.019*** (0.002)
Baseline controls & FE	✓	✓	✓
Observations	7,669	7,669	7,669

Notes: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. Standard errors clustered at the father's country of origin in Panel A and at the father's year of arrival in Panel B are reported in parentheses. Estimates are obtained using a linear probability model with the individual controls and paternal fixed effects from Column (4) of Table 2. The table reports the effect of parental cultural shock on respondents' sense of belonging.

Figure C.1: Women, Business and the Law (WBL) index for all countries, 1971–2024

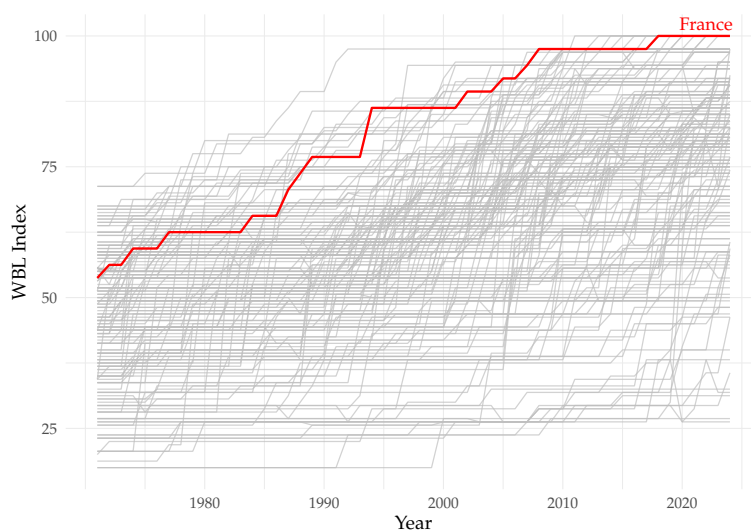


Table C.4: Sample restricted to the first wave of TeO

	Seen as French (1)	Feels at home in France (2)	Feels French (3)
Cult. shock	-0.042*** (0.004)	-0.018*** (0.005)	-0.026*** (0.004)
Baseline controls & FE	✓	✓	✓
Observations	3,196	3,196	3,196

Notes: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. Standard errors clustered at the département level are reported in parentheses. Estimates are obtained using a linear probability model with the individual controls and paternal fixed effects from Column (4) of Table 2. The table reports the effect of parental cultural shock on respondents' sense of belonging when restricting the sample to the first wave of TeO, thereby excluding the period affected by Covid-19.

Table C.5: Stress test: alternative exclusion of origin countries

	Seen as French	Feels at home in France	Feels French
Panel A. Excluding Algeria			
Cult. shock	-0.038*** (0.004)	-0.015*** (0.004)	-0.014*** (0.003)
Observations	5,622	5,622	5,622
Panel B. Excluding Morocco			
Cult. shock	-0.040*** (0.003)	-0.017*** (0.003)	-0.020*** (0.003)
Observations	6,812	6,812	6,812
Panel C. Excluding Portugal			
Cult. shock	-0.042*** (0.003)	-0.018*** (0.003)	-0.019*** (0.002)
Observations	6,743	6,743	6,743
Panel D. Excluding Turkey			
Cult. shock	-0.043*** (0.003)	-0.017*** (0.003)	-0.018*** (0.002)
Observations	7,230	7,230	7,230
Panel E. Excluding Italy			
Cult. shock	-0.045*** (0.003)	-0.019*** (0.003)	-0.020*** (0.003)
Observations	7,065	7,065	7,065
Panel F. Excluding Vietnam			
Cult. shock	-0.043*** (0.003)	-0.018*** (0.003)	-0.019*** (0.003)
Observations	7,401	7,401	7,401
Baseline controls & FE	✓	✓	✓

Notes: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. Standard errors clustered at the département level are reported in parentheses. Estimates are obtained using a linear probability model with the individual controls and paternal fixed effects from Column (4) of Table 2. The table reports the effect of parental cultural shock on respondents' sense of belonging when alternatively excluding individuals with at least one parent born in Algeria (Panel A), Morocco (Panel B), Portugal (Panel C), Turkey (Panel D), Italy (Panel E), or Vietnam (Panel F).

Table C.6: Stress test: alternative exclusion of arrival decades

	Seen as French	Feels at home in France	Feels French
Panel A. Excluding arrivals before 1950			
Cult. shock	-0.045*** (0.003)	-0.019*** (0.003)	-0.021*** (0.003)
Observations	6,864	6,864	6,864
Panel B. Excluding arrivals in the 1950s			
Cult. shock	-0.044*** (0.003)	-0.018*** (0.003)	-0.019*** (0.003)
Observations	6,131	6,131	6,131
Panel C. Excluding arrivals in the 1960s			
Cult. shock	-0.036*** (0.004)	-0.017*** (0.004)	-0.018*** (0.003)
Observations	4,976	4,976	4,976
Panel D. Excluding arrivals in the 1970s			
Cult. shock	-0.043*** (0.003)	-0.017*** (0.003)	-0.018*** (0.003)
Observations	5,696	5,696	5,696
Panel E. Excluding arrivals in the 1980s			
Cult. shock	-0.045*** (0.003)	-0.017*** (0.003)	-0.019*** (0.002)
Observations	7,109	7,109	7,109
Panel F. Excluding arrivals in the 1990s			
Cult. shock	-0.044*** (0.003)	-0.017*** (0.003)	-0.019*** (0.003)
Observations	7,577	7,577	7,577
Baseline controls & FE	✓	✓	✓

Notes: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. Standard errors clustered at the département level are reported in parentheses. Estimates are obtained using a linear probability model with the individual controls and paternal fixed effects from Column (4) of Table 2. The table reports the effect of parental cultural shock on respondents' sense of belonging when alternatively excluding individuals whose father arrived in France before 1950 (Panel A), in the 1950s (Panel B), 1960s (Panel C), 1970s (Panel D), 1980s (Panel E), or 1990s (Panel F).

Table C.7: Controlling for origin-specific linear trends

	By father's year of arrival			By father's year of birth		
	Seen as French (1)	Feels at home in France (2)	Feels French (3)	Seen as French (4)	Feels at home in France (5)	Feels French (6)
Cult. shock	-0.043*** (0.003)	-0.018*** (0.003)	-0.020*** (0.002)	-0.040*** (0.003)	-0.019*** (0.003)	-0.018*** (0.003)
Origin × father's year of arrival	✓	✓	✓	✗	✗	✗
Origin × father's year of birth	✗	✗	✗	✓	✓	✓
Baseline controls & FE	✓	✓	✓	✓	✓	✓
Observations	7,669	7,669	7,669	7,581	7,581	7,581

Notes: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. Standard errors clustered at the département level are reported in parentheses. Estimates are obtained using a linear probability model with the individual controls and paternal fixed effects from Column (4) of Table 2. Columns (1)–(3) additionally include origin-specific linear trends based on the father's year of arrival. Columns (4)–(6) additionally include origin-specific linear trends based on the father's year of birth.

D Mechanisms

Figure D.1: Correlation matrix between distance measures

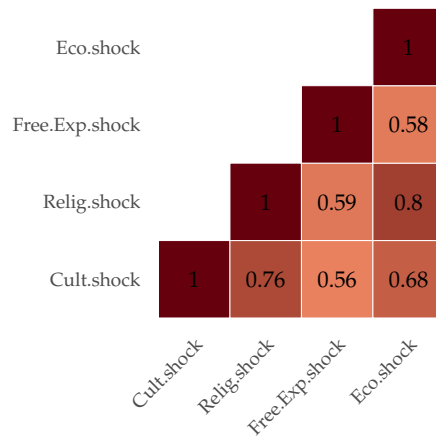


Figure D.2: Evolution of the modal education level by occupation

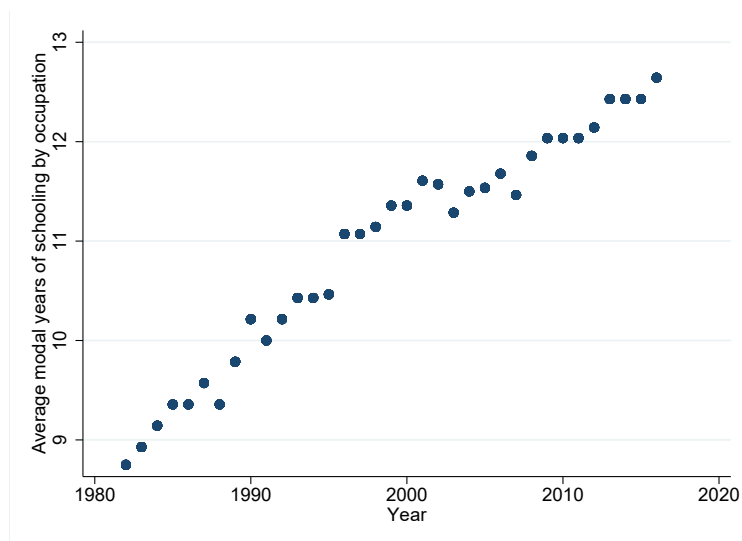


Table D.1: Association between parental overqualification and sense of belonging

	Overqualified mother			Overqualified father		
	Seen as French (1)	Feels at home in France (2)	Feels French (3)	Seen as French (4)	Feels at home in France (5)	Feels French (6)
Overqualified parent	-0.041 (0.027)	-0.025 (0.017)	-0.011 (0.019)	-0.030 (0.019)	0.006 (0.016)	0.005 (0.014)
Baseline controls & FE	✓	✓	✓	✓	✓	✓
Parental education	✓	✓	✓	✓	✓	✓
Observations	4,262	4,262	4,262	6,675	6,675	6,675

Notes: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. Standard errors clustered at the département level are reported in parentheses. Estimates are obtained using a linear probability model with the individual controls and paternal fixed effects from Column (4) of Table 2. The table reports the association between respondents' sense of belonging and parental skill mismatch. Columns (1)–(3) use a dummy for overqualified mothers, while Columns (4)–(6) use a dummy for overqualified fathers. We additionally control for both parents' years of schooling.

D.1 First generation's sense of belonging

Table D.2 reveals that the impact of the experienced cultural shock on sense of belonging in France is actually positive and insignificant for first generation immigrants. Coefficients appear significant only when controlling for time spent in the destination country, especially for the 'feeling French' indicator of sense of belonging. However, interacting this time since arrival in France with the cultural shock gives a negative and significant coefficient. Years in France appear to mitigate the positive effect of the cultural shock on the likelihood of feeling seen as French. A turning point in this relationship is observed after 47 years,

meaning that after 47 years spent in France, the overcome cultural shock starts having a negative effect on the probability of feeling French.

Table D.2: First-generation immigrants' sense of belonging

	Baseline			With time in France		
	Seen as French (1)	Feels at home in France (2)	Feels French (3)	Seen as French (4)	Feels at home in France (5)	Feels French (6)
Cult. shock	0.016* (0.008)	0.012* (0.006)	0.020*** (0.006)	0.028*** (0.008)	0.014** (0.005)	0.026*** (0.005)
Time in France				0.012*** (0.002)	0.012*** (0.002)	0.015*** (0.002)
Cult. shock × time in France				-0.001*** (0.000)	-0.000 (0.000)	-0.000 (0.000)
Baseline controls & FE	✓	✓	✓	✓	✓	✓
Observations	5,903	5,903	5,903	5,903	5,903	5,903

Notes: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. Standard errors clustered at the département level are reported in parentheses. Estimates are obtained using a linear probability model with controls and fixed effects as in Column (4) of Table 2. The sample is restricted to first-generation immigrants with characteristics similar to those of the parents of second-generation respondents, as in Table 7 in Section 6. Columns (4)–(6) additionally control for time spent in France and include its interaction with cultural shock. In these specifications, year-of-arrival fixed effects are excluded to avoid multicollinearity with time at destination.