

## Article

# Parochial Linguistic Education: Patterns of an Enduring Friction within a Divided Catalonia

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**Abstract:** Amid the tensions created by the secession push in Catalonia (Spain), an important conflicting issue has been the “immersion linguistic educational system”, in which the Catalan language has precedence throughout all of the primary and secondary school curricula. Here, we present an analysis of a survey ( $n = 1002$ ) addressing features of linguistic and political opinion profiles with reference to the mother language and feelings of national identity. The results show that the mother language is a factor that differentiated the participants in terms of common linguistic uses and opinions about the “immersion educational system”. These results were confirmed when segmenting respondents via their feelings of national self-identification. The most distinctive political opinions consisted of either asserting or denying the damage to social harmony produced by the secession campaign. Overall, the findings show that a major fraction of the Catalan citizenry is subjected to an education system that does not meet their linguistic preferences. We discuss these findings, connecting them to an ethnolinguistic divide based mainly on mother language (Catalan vs. Spanish) and family origin—a complex frontier that has become the main factor determining alignment during the ongoing political conflict.

**Keywords:** secessionism; Catalonia; immersion linguistic education; bilingualism; ethno-linguistic cultures; political conflict



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## 1. Introduction

Political tensions became unsettled in Catalonia (Spain) following the failed proclamation of independence on 27 October 2017. By winning four consecutive regional elections over the last decade, the secessionist forces have sustained a challenge that has resulted in a divided society. There is a clear political split among Catalan citizens on the issue of secession from Spain. Throughout the period of 2015–2021, the question “*Do you want Catalonia to be an independent state?*” (CEO “Political Barometers” (CEO (Centre d’Estudis d’Opinió, <http://ceo.gencat.cat/> (accessed on 22 August 2021)). “Political Barometers”: Surveys that are iterated three times per year, at least, using adequately large and representative samples of the Catalan citizenry)) received “YES” answers at rates oscillating between 42 and 48%, “NO” answers at rates between 43 and 49%, and “DON’T KNOW” answers at rates of 5–10%. Similar ranges appeared in regular C.I.S. surveys (official agency of the Spanish Central Government; CIS (Centro de Investigaciones Sociológicas, <http://www.cis.es/cis/opencms/ES/index.html> (accessed on 22 August 2021))).

The fracture represents a society that is divided into secessionists and unionists, who are separated by a narrow margin of around 100,000 votes in successive regional elections.

The main consequence of activities that are devoid of a social majority has been the excavation of a deep divide between these two main fractions of the Catalan citizenry

that was absent before (Amat 2017; Balcells et al. 2021; Elliot 2018; Oller et al. 2019a, 2019b, 2019c; Tobeña 2021; Ucelay-da-Cal 2018).

Around 3 million potential Catalan voters (from an electoral census of around 5.5 million, within a population of 7.5 million persons) did not join the secession venture. Most have familial, affective, and economic links with Spain. They are heterogeneous, though the majority are first- and second-generation descendants of migrations from other Spanish regions that settled in towns in industrial areas of Barcelona and Tarragona, as well as in other suburban neighbourhoods in medium-sized villages scattered throughout the region (Lepic 2017; Maza et al. 2019). The main ethnolinguistic divide that separates secessionists from unionists can be described as follows (this is a swift and purely instrumental way of describing complex, nuanced, and far-from-stable typologies. For more accurate and detailed descriptions, see Oller et al. (2019a, 2019b) and Tobeña (2021)): native Catalonians by family descent plus individuals from various origins who have adopted an exclusive Catalan identity, both culturally and politically, vs. long-settled Catalonians who came from other Spanish regions, recent waves of Latin-American migrants, and natives with a firmly rooted dual identity (Catalan and Spanish). The first commonly use the Catalan language in all professional and living domains, whereas the second commonly prefer Spanish, though most of them also have a good knowledge and instrumental command of Catalan because it is the mandatory first language in primary schools and in most secondary education (see: “EULP2018-Enquesta Usos lingüístics de la població, Institut Estadístic Catalunya”; ([www.idescat.cat/pub/?id=eulp](http://www.idescat.cat/pub/?id=eulp) (accessed on 21 August 2021))).

In an extensive and systematic longitudinal analysis that included the whole series of CEO Barometers from 2006 to 2020, Oller et al. (2019b, 2019c) and Tobeña (2021) showed that mother language and ascendancy origins were essential factors for explaining the entrenched political division between secessionists and unionists. These two ethnolinguistic components determine alignment in terms of both feelings of national identity and support for secession. In a subsequent analysis, Oller et al. (2020) suggested the additional, although relatively minor, influence of economic segmentation on the differential alignments in favour of or against secession. These findings were fully confirmed by surveys exploring the role of material interests in preferences for secession (Hierro and Queralt 2021) and through detailed analyses of recent electoral results (Llaneras 2021).

Miley (2007) had already established that the operation of divergent modes of national identification in Catalan society rested on an ethnolinguistic gap. Using CIS surveys and other social data, he described a divide that distinguished the self-identification of two segments of the citizenry: “native, Catalan-speaking” citizens and their “Spanish-speaking neighbours” with origins as immigrants from other regions of Spain. “Mother tongue” had the strongest impact on identification as predominantly Catalan vs. mostly Spanish or mixed “*CatSpanish*”. His subsequent studies (Miley 2013; Miley and Garvía 2019) underlined the gap between the political preferences of the citizenry and those enforced by representatives in the Regional Parliament: the “*immersion system*” of language education at schools and the policies associated with it were clearly inconsistent with the preferences of Spanish-speaking citizens. (In 1994, the Spanish Constitutional Court sanctioned the validity of the Catalan “*immersion model*” regarding languages for primary and pre-schooling education, which was characterized by Catalan being the main language of instruction, while Spanish remained compulsory, but was limited to language courses, and a minimum number of subjects were taught in Spanish (5–10% of instruction time in primary education). Language use in secondary schools was less affected by the first Catalan Education Law, which was issued in 1983 as a way to restore social and official relevance to a widely used regional language, Catalan, which had resisted the pressure of the Spanish language (and, less successfully, of the French language across the Pyrinées) for centuries (Arнау 2013; Vila 2020). The subsequent *Language Policy Law* (LPL) of 1998 established the “*immersion regime*” as mandatory in all non-university education and, at least, in public schools. The LPL also implemented several changes regarding the relevance of the Catalan language in the labour market. First, it settled on a required

level of proficiency in Catalan as a prerequisite for entering public-sector jobs. Second, it incentivized the use of Catalan in private businesses, especially among firms who had links with the regional public sector and service firms with a strong relationship with customers.)

Clots-Figueras and associates (Aspachs-Bracons et al. 2008a, 2008b; Clots-Figueras and Masella 2013) showed that the Catalonian educational norms in 1983 (the initial steps towards the full “immersion system”) shifted both national identity and political preferences towards higher levels of self-identification linked to nation-building. Using a 2001 CIS survey on a representative sample of more than 2300 citizens from different age cohorts, they showed on a five-level scale of “feelings of belonging” that “Catalan only” or “more Catalan than Spanish” identities were affected by the number of years of education received under the regime of “immersion instruction”. A similarly increasing trend appeared when measuring political preferences: Both electoral support for nationalist parties and approval of self-determination for Catalonia were on the rise. The influence of the new educational system was greater for individuals whose parents were born in Catalonia, but it was also noticeable in those whose parents were from outside the region. They estimated that every year of exposure to the educational reform increased the probability of feeling “only Catalan”, “more Catalan than Spanish”, or “as Catalan as Spanish” by more than 2%.

Garvía and Santana (2020) provided the first large-scale survey on the opinion of the Catalonian citizenry about the “immersion regime” of language education in primary and secondary schools. Before this study, only a 1998 CIS survey had explored the issue, which often appeared at the forefront of political debate, but it was quickly muted. The preferred option for most respondents at that time was equal treatment of both the Catalan and Spanish languages at all educational steps. Garvía and Santana (2018, 2020) surveyed a representative sample of 2202 individuals (from eighteen years old) in 2016. The sample was stratified according to population sizes in each of the four Catalonian provinces. Respondents were interviewed by phone and selected through random dialling whilst considering provincial distributions of age and gender. The interviewers were fully bilingual, and the participants answered in either Catalan or Spanish at their discretion.

Twenty years after the 1998 CIS survey, the findings remained almost identical: The “immersion system” was approved by 50% of the citizenry, while the other half of the population preferred an educational system that left decisions pertaining to the school’s language to parents’ choices or that offered two options depending on one’s mother language. Respondents’ opinions were divided depending on their mother language: Native Catalan speakers overwhelmingly preferred (73%) the “immersion system”, whereas native Spanish speakers were mostly (63%) against it. An equivalent division appeared when opinions about the “immersion system” were ascertained in relation to preferences regarding secession from Spain: Those in favour of secession strongly approved (78%) the “immersion system”, whereas the non-secessionists were clearly against it (74%). This clear divide diminished when the options included parents’ decisions or the possibility of distinct educational practices according to one’s mother language. When the English language was presented as an option as a third main language, the answers became more distributed. All groups then held some preference for Catalan, with similar percentages associated with Spanish and English, although native Catalan speakers had a stronger preference for Catalan, with lower prioritization for both English and Spanish.

Calero and Choi (2019) studied the effects of Catalonian immersion policies on the academic performance of students. They used data from the 2015 wave of the PISA (*Programme for International Student Assessment*, a worldwide study in OECD countries), which evaluated 15-year-old Catalonian students with a test administered in Catalan. The skills assessed were science, reading, and math. The full sample involved 52 centres (both public and “subsidized” private centres—those following the policies of the regional administration) with a total of 1769 students. Fully private centres (non-subsidized) were excluded because not all of them applied the *immersion schooling* in the Catalan language. To ensure that the surveyed individuals had received identical treatment (immersion throughout all years of compulsory schooling), those who had arrived in Spain at 6 years

of age or older were withdrawn. After these two filters, the final sample comprised 1347 students who were equally weighted for gender and were enrolled in 44 centres. The comparison of the scores attained in these three areas—science, reading, and math—showed a strong detrimental effect on students coming from homes with a mother language that was different from Catalan. This drop was noticeable in students from Spanish-language homes, and even more so for students from homes that spoke another language (mostly from migrant homes). Students from Spanish-speaking homes achieved PISA science scores that were 10.85 points lower than those whose language at home was Catalan. For reading abilities, the disparity was 10.30 points. The language of the PISA test (for the Catalan version only) could partially explain these differences. The lack of influence of the mother language on math abilities suggests that math tasks require a different formalized language, which is thus presumably protected from educational disadvantages. By applying multilevel regression analyses to the entire sample, Calero and Choi (2019) confirmed that “*The students who use Spanish at home, being educated in a linguistic immersion regime in Catalan language, achieved inferior performances in the competencies evaluated by PISA than their classmates whose family language was Catalan, once controlled the rest of personal, socio-cultural and economic characteristics*”.

These antecedents explain why educational policies have recently become the focus of political debates both within the region and in the rest of Spain. One of the issues that has dominated partisan tensions is the openly biased *immersion educational policy* of the regional pro-secession administration, which promotes Catalan against the preferences of the majority of Catalonian citizens (Miley 2013; Miley and Garvía 2019; Garvía and Santana 2018, 2020). It could thus be useful to derive further insights into citizens’ opinions on the linguistic education system and on issues concerning several aspects of the ongoing political conflict, particularly given the entrenched social division and the political stalemate that has followed the failed independence proclamation in 2017.

Through an exploratory survey, we expected to establish useful distinctions between opinions on the “*immersion educational system*” from both sides of the political divide. By studying the patterns of differences between respondents and segmenting them by either “*mother language*” or “*feelings of national identity*”, we also hoped to better discern important attributes and opinions that characterize the current divide between the secessionist and unionist citizenries. As the secession campaign failed to achieve its ultimate goals while creating a political deadlock that has expanded the distance between secessionists and unionists, re-examining the differences concerning one of the most divisive points—preferences about the linguistic educational system and governance policies linked to it—might offer a potentially useful insight into the ongoing social division.

## 2. Methods

### 2.1. Participants

The participants were responders to a survey developed by the GAD-3 enterprise (GAD-3 (<https://www.gad3.com/> (accessed on 22 August 2021))) in December 2020 through phone calls to either the landlines or mobile phones of people over 18 years old residing in Catalonia. The sample was representative of all people over 18 years old living in Catalonia; the population here slightly differed from that found in ordinary political surveys, which are more focused on citizens with the right to vote. This was the legal-age population that was directly affected by current laws (both central (all of Spain) and regional (Catalonia) laws). The sample size was  $n = 1002$  people who were surveyed across the region, and it was weighted afterwards for age group and gender to avoid or reduce sample biases.

### 2.2. Instrument

The survey included 22 questions (see the SI Appendix for the full survey drafted by the GAD-3 private polling institute) about linguistic and educational issues, as well as opinions about political and governance topics related to the ongoing secession conflict in the

region, among other standard socioeconomic issues, such as gender, age group, profession, and labour situation (see Table S1 in the Supplementary Materials). The standard error of the estimated percentages corresponding to each binary question was less than 1.6%. For reasons of time and economy, some questions were directed to only  $n = 402$  individuals (survey questions Q05 to Q09), and the standard error of the percentages corresponding to each of these binary questions was less than 2.5%. Through this standard error, we could obtain appropriate approximate confidence intervals.

### 2.3. Statistics

All variables came directly from different survey questions, with exceptions that are explained below. After obtaining distributions for the entire sample, we focused first on the variable “*mother language*” (Q3.02 of the survey, see the SI Appendix), as this allowed division of the population into four groups that were determined by the answers given: “Spanish”, “Catalan”, “Both”, and “Other”. This variable can be considered structural and characteristic of a population (Oller and Satorra 2017), since the mother tongue is an attribute that is fixed from an early age and cannot be (easily) modified at will. We were interested in determining the association or stochastic dependence between the segmentation of “*mother language*” and the rest of the variables of the survey. Some of these variables will owe their stochastic dependence to their own nature, while for others, the association will result from political context. In the first analysis of the described dataset, we focused on the marginal stochastic dependence of several linguistic and political variables (the 26 variables from the survey plus another 2 that were built on transformations of these ones) on “*mother language*”, which was addressed in each of its four abovementioned categories. With “*mother language*” and each of the remaining 28 variables, we made a contingency table, which allowed us to calculate a standard chi-square test,  $\chi^2$ , based on a weighted sample, its  $p$ -value, and a standardized contingency coefficient of Pearson (the standardized coefficient of contingency,  $C$ , is defined as  $C = \sqrt{\frac{m \chi^2}{(m-1)(\chi^2+n)}}$ , where  $n$  is the total sample size; in the present case,  $n = 1002$  (or  $n = 402$ ) and  $m = \min\{k, q\}$ , where  $k$  is the number of segments corresponding to one categorical variable, for example, “secession support”, with  $k = 3$ , and  $q > 1$  is the number of segments corresponding to the other categorical variable considered),  $C$  (Pearson 1904). This coefficient is a measure of the stochastic dependence between the pair of variables in question and is less dependent than the  $\chi^2$  statistics on the sample size and the number of categorical variables. We used it in a previous study (Oller et al. 2019a). The results for the dependence of the studied variables on *mother language* are presented in tables and lollipop graphics as we shall see later. By itself, the analysis of the contingency coefficients was not enough to characterise the linguistic segments, and when the response frequencies were relevant, it was convenient to complement them with bar charts.

We repeated this process, but this time, we segmented according to the variable “*feelings of national identity*” (Q18, see the SI Appendix), which was categorised into six groups: “only Spanish”, “more Spanish than Catalan”, “as Spanish as Catalan”, “more Catalan than Spanish”, “only Catalan”, and “DK/NA”. In this case, the segmentation was not structural and was heavily dependent on recent history and the accompanying conflictual events (Oller et al. 2019b). This variable depended on the standard 5-point Linz–Moreno measure of national identification. This measure has well-known limitations (Guinjoan and Rodón 2015; Cussó et al. 2018; De Nieves and Diz 2019), but is the preferred means of assessing national identity in political surveys in Spain (and other countries when duly adapted), and it coheres well with other means of quantitatively estimating feelings of national self-identification.

We were interested in finding the variables that were most associated with “*feelings of national identity*”. In our first analysis of the described dataset, we focused on the marginal stochastic dependence of several linguistic and political variables (the 26 variables of the survey plus another 2 built on transformations of these) on “*feelings of national identity*” in

the form of the six abovementioned categories. With this and the other 28 variables, we made a contingency table, which allowed us to calculate a standard chi-square test,  $\chi^2$ , based on a weighted sample, its  $p$ -value, and a standardized contingent Pearson coefficient,  $C$ . The results for the dependence of the studied variables on *feelings of national identity* are presented in Table 4 and Figure 4.

Finally, two “polarized gap” plots were also built to display the most distinctive differences obtained via the segmentations by “*mother language*” (Figure 4) and “*feelings of national identity*” (Figure 5) through the survey questions. We called them “polarized gap” plots because the differences portrayed emphasise distancing and the negative effects on social cohesion within a community. These plots are descriptive statistics that help to visualise the differences between two groups regarding a series of questions with one or more alternative answers. Each point marked on the plot represents a question from the survey. The closer the points are to the diagonal of the graph, the more equal the indicated segments will be. Specifically, given two population segments, 1 and 2, for each survey variable  $k$ , let  $n_{i1k}$  and  $n_{i2k}$  be the absolute frequency of response  $i$  of this variable  $k$  within segment 1 and segment 2, respectively. If, as usual,  $n_{.1k} = \sum_i n_{i1k}$  and  $n_{.2k} = \sum_i n_{i2k}$ , we shall state that  $\beta_k = \operatorname{argmax}_i \left| \frac{n_{i1k}}{n_{.1k}} - \frac{n_{i2k}}{n_{.2k}} \right|$ ,  $X_k = \frac{n_{\beta_k 1k}}{n_{.1k}}$  and  $Y_k = \frac{n_{\beta_k 2k}}{n_{.2k}}$ , and then use the pairs  $(X_k, Y_k)$  to build a scatterplot, additionally adding the bisector to clarify the gap between both segments.

Although the present study tried to establish associations between the variables, in some cases, it was necessary to make explicit estimations for the frequencies of some responses over the whole population. These frequencies are presented in several tables (Tables 1, 2, and Table S1), though the main focus was on certain population segments. In addition to the variables derived from the survey questions, we introduced two additional variables, which were built from these. These variables are named B01 “*family origin*” (a qualitative variable based on variables Q21 and Q22 that allows us to distinguish between individuals born in Catalonia and those born in the rest of Spain or abroad) and B02 “*mainly Catalan identity*”, which was built from Q18 by adding “only Catalan” and “more Catalan than Spanish” to the feelings of national identity.

The present analysis, which was based on data from a survey, involved a few well-known and simple statistical techniques. Taking the considerable number of comparisons analysed into account—just over 50—it would usually be recommended to work with significance levels lower than the usual 5% based on the conservative Bonferroni type of reasoning. Thus, instead of using 5% as the significance level, it was preferable to select a new one by dividing 0.05 by the number of comparisons. As such, for 50 comparisons, we should employ significance levels of the order of 1‰.

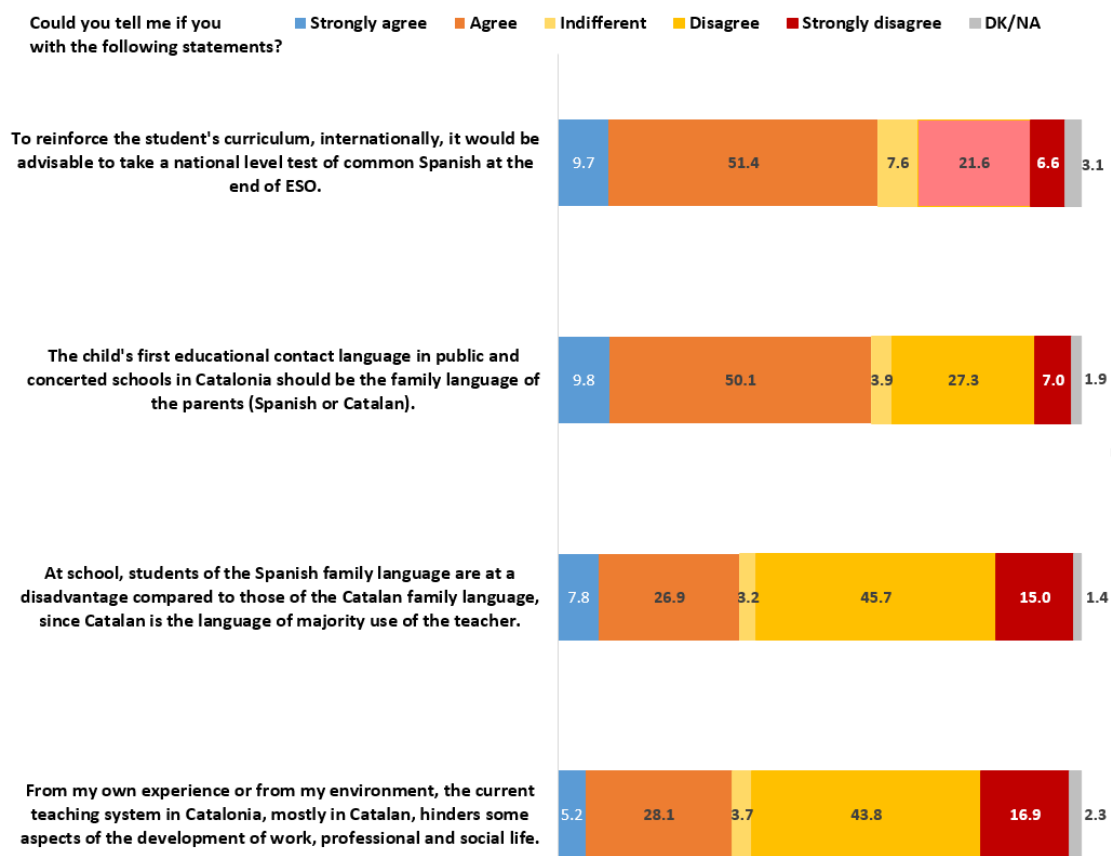
### 3. Results

The distributions of opinions/preferences related to several questions for the entire sample are presented first (Tables 1 and 2; Figure 1). Then, several figures show the full pattern of contrasts obtained by segmenting the sample by either “*mother language*” (“Catalan”, “Spanish”, “both languages”, “other languages”) (Table 3, Figures 2 and 3) or “*feelings of national identity*” in six groups (“only Spanish”, “more Spanish than Catalan”, “as Spanish as Catalan”, “more Catalan than Spanish”, “only Catalan”, and “DK/NA”) (Table 4, Figures 4 and 5).

**Table 1.** Preferences regarding the linguistic educational system at school. The table displays preferences regarding the language system used at schools for the entire sample (questions Q005 and Q006). The answer “basically in Catalan” as an answer to Q006 is abbreviated; the exact survey answer is “all in Catalan, except for a Spanish Language course and in one or two core subjects”. The same applies to the answer “*basically in Spanish*”, exchanging Catalan for Spanish. None of these answers apply to the current educational language policy, which reduces the time spent on the Spanish language in secondary education to two or three hours per week.

Education System	Trilingual (Catalan, Spanish, and English Languages)	Bilingual/Balanced Catalan and Spanish	Catalan, Essentially	Spanish, Essentially	Parents' Choice	DK/NA
Preference of Option 1, Q05 (%)	64.1	21.1	9.0	5.0	—	0.8
Preference of Option 2, Q06 (%)	53.4	21.4	12.0	4.7	6.6	1.9

### Opinions on the Linguistic Educational System



**Figure 1.** Distributions of preferences derived from several questions concerning the *immersion linguistic educational system* in Catalonia. There was significant agreement with the first statement, “*To reinforce student's curriculum, internationally, it would be advisable to take a national test of the Spanish language at the end of secondary education*”, and also with the fourth statement, “*The child's first educational contact language in public and concerted schools in Catalonia should be the family language of the parents (Spanish or Catalan)*”. In both cases, the support was above 60% in the entire population. Concerning the second and third statements, the degree of support was about 33%, although several differences were observed after dividing the population into segments. ESO: compulsory secondary education.

**Table 2.** Opinions on the current governance policies regarding language issues.

	Yes	No	DK/NA
Have you felt discriminated against because of your language in Catalonia? Q15	21.4	78.0	0.6
Do you agree that establishments that do not label their products in Catalan should be fined? Q16	4.9	82.0	13.1

**a.** Preferences about the Catalan linguistic educational system.

The table displays opinions about current governance policies concerning language issues in the region. The answer to Q15 shows that a clear majority of participants (78%) did not feel discriminated against for linguistic reasons, though there were noticeable differences in this variable when the population was divided into segments (see SI). The answer to Q16 shows that a clear majority of participants (82%) disapproved of fines for businesses for not labelling products in Catalan.

**b.** Segmentations according to different categories.

Table 3 and Figure 2 present the results of segmenting the population by “*mother language*” and crossing it with other variables derived from the survey, indicating the value of the chi-square of each contingency table, its degrees of freedom, the standardized Pearson contingency coefficient,  $C$ , and the  $p$ -values of the tests. The variables are grouped in consideration of their nature, and each group is presented in descending order, from the top down, of its association magnitude, as measured by the contingency coefficient,  $C$ . Only the variables of “*gender*” and “*image of Spain affected*” presented insignificant stochastic dependence on “*mother language*”. All of the remaining variables exhibited clear stochastic dependences on that variable that were significant at a value of at least 5%, and in most cases, they had very small  $p$ -values (it is worth remembering that the contingency coefficient and significance are different concepts; we can have low but highly significant contingency coefficients and high contingency coefficients that are less significant, which is partly because they are based on samples with a smaller sample size). Even if we use reasoning based on Bonferroni inequality, which would lead us to lower levels of significance (1%, for instance), the vast majority of variables must be considered to be stochastically dependent on “*mother language*”.

**b.1.** Linguistic segmentation based on Q03.2 (*Mother Language*):

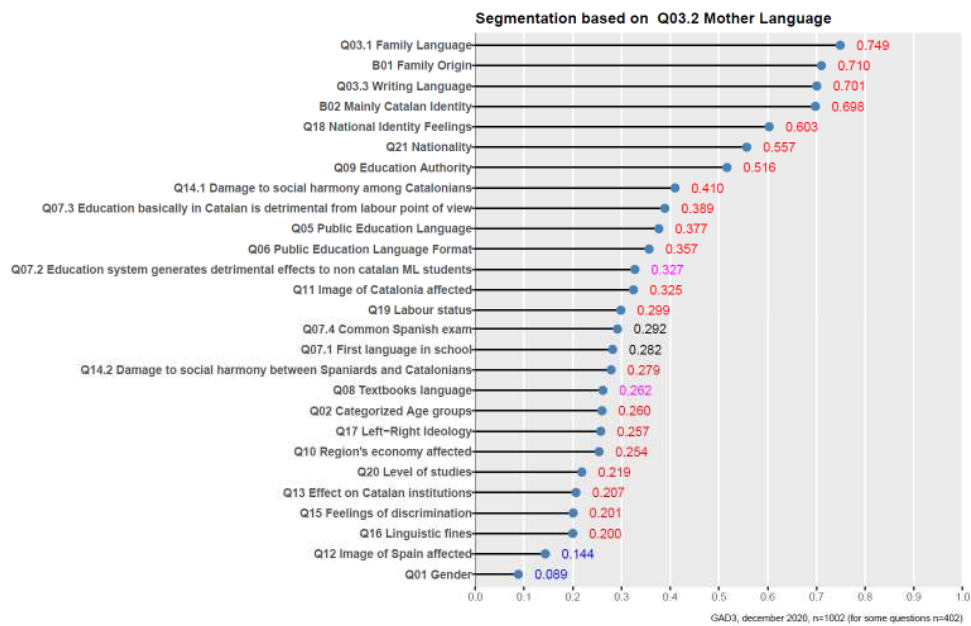
**b.2.** “Feelings of national identity” segmentation (variable Q18):

Table 4 and Figure 4 present the results of the segmentation of the population with the variable “*feelings of national identity*” and of crossing it with other variables derived from the survey, thus indicating, as before, the value of the chi-square of each contingency table, its degrees of freedom, the standardized Pearson contingency coefficient, and the  $p$ -value of the test. The variables are grouped in consideration of their nature, and each group is presented in descending order, from the top down, of association magnitude, as measured by the contingency coefficient,  $C$ . Only the variables of “*gender*” and “*first language in school*” present an insignificant stochastic dependence on “*feelings of national identity*”, while all of the remaining variables exhibit clear stochastic dependence on this variable, which is significant at values of at least 5%, with very small  $p$ -values in most cases.

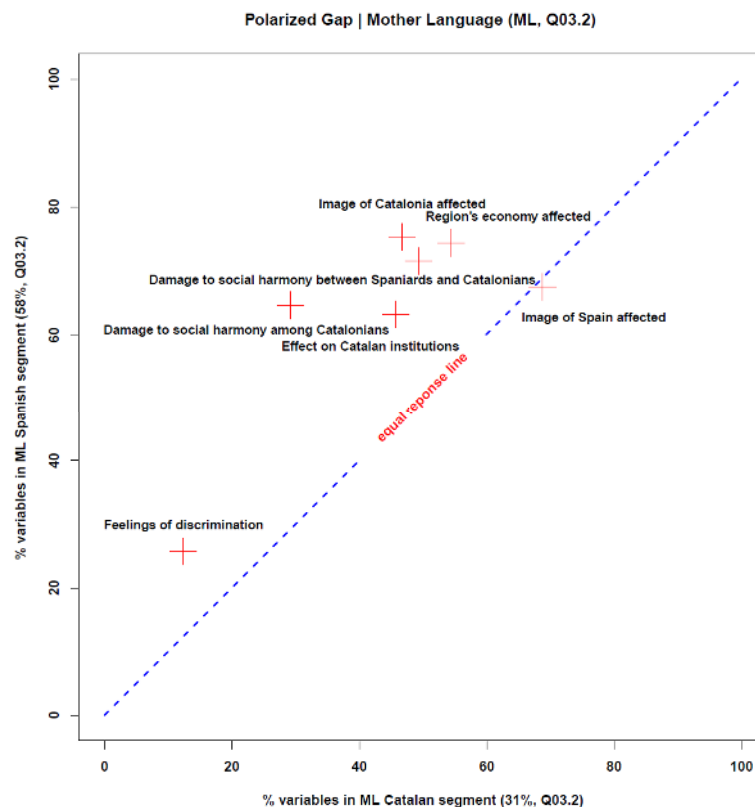


**Table 3.** Association coefficients of the “mother language” segments (“Catalan”, “Spanish”, “both languages”, “other languages”) with each of the remaining variables. (These denote different opinions, preferences, and traits derived from a GAD-3 survey in December 2020 with a sample size of  $n = 1002$  (or  $n = 402$  for a group of variables) Catalonian residents. The variables are grouped in consideration of their nature, and each group is presented in descending order, from the top down, of the magnitude of association, as measured by the contingency coefficient,  $C$ . Only the variables of “gender” and “image of Spain affected” presented an insignificant stochastic dependence on “mother language”, while all of the remaining variables exhibited clear stochastic dependence on this variable.)

Variable	$\chi^2$	<i>d.f.</i>	<i>p</i> -Value	<i>C</i>
<b>Language variables</b>				
Q03.1 Family Language	727.4	9	$\leq 10^{-16}$	0.7489
Q03.3 Writing Language	583.8	12	$\leq 10^{-16}$	0.7006
<b>Origin and nationality</b>				
B01 Family Origin	507.4	6	$\leq 10^{-16}$	0.7101
Q18 National Identity Feelings	375.8	15	$\leq 10^{-16}$	0.6031
Q21 Nationality	303.9	9	$\leq 10^{-16}$	0.5570
B02 Mainly Catalan Identity	322.5	3	$\leq 10^{-16}$	0.6979
<b>Education Language Issues</b>				
Q09 Education Authority	102.0	12	$\leq 10^{-15}$	0.5164
Q07.3 Education basically in Catalan is detrimental from labour point of view	52.3	15	$\leq 10^{-5}$	0.3890
Q05 Public Education Language	119.3	12	$\leq 10^{-16}$	0.3767
Q06 Public Education Language Format	105.7	15	$\leq 10^{-8}$	0.3567
Q07.2 Education system generates detrimental effects to non catalan mother language students	35.7	15	0.0020	0.3275
Q07.4 Common Spanish exam	27.9	15	0.0225	0.2919
07.1 First language in school	25.9	15	0.0395	0.2818
Q08 Textbooks language	22.1	9	0.0085	0.2618
<b>Opinion on the secession campaign (<i>procés</i>)</b>				
Q14.1 Damage to social harmony among Catalonians	126.4	6	$\leq 10^{-16}$	0.4099
Q11 Image of Catalonia affected	86.0	9	$\leq 10^{-8}$	0.3246
Q14.2 Damage to social harmony between Spaniards and Catalonians	54.8	6	$\leq 10^{-8}$	0.2789
Q10 Region’s economy affected	50.9	9	$\leq 10^{-7}$	0.2539
Q13 Effect on Catalan institutions	33.2	9	0.0001	0.2066
Q15 Feelings of discrimination	27.7	6	0.0001	0.2010
Q16 Linguistic fines	27.5	6	0.0001	0.2001
Q12 Image of Spain affected	15.8	9	0.0716	0.1438
<b>Reference population variables</b>				
Q19 Labour status	71.8	18	$\leq 10^{-7}$	0.2987
Q02 Categorized Age groups	53.6	9	$\leq 10^{-7}$	0.2601
Q17 Left-Right Ideology	52.4	15	$\leq 10^{-5}$	0.2575
Q20 Level of studies	33.0	6	$\leq 10^{-4}$	0.2186
Q01 Gender	3.9	3	0.2676	0.0885



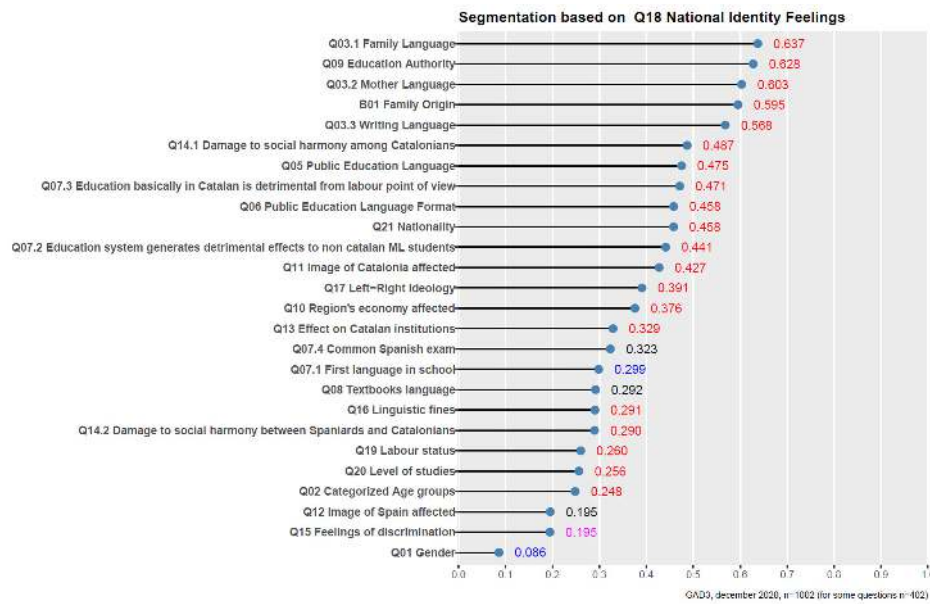
**Figure 2.** Differences among Catalonians depending on the “mother language” segmentation in Table 3. The variables are sorted by their C values. The different colours of the figures correspond to p-values that are less than 0.001 (red), between 0.001 and 0.01 (magenta), between 0.01 and 0.05 (black), or just over 0.05 (blue).



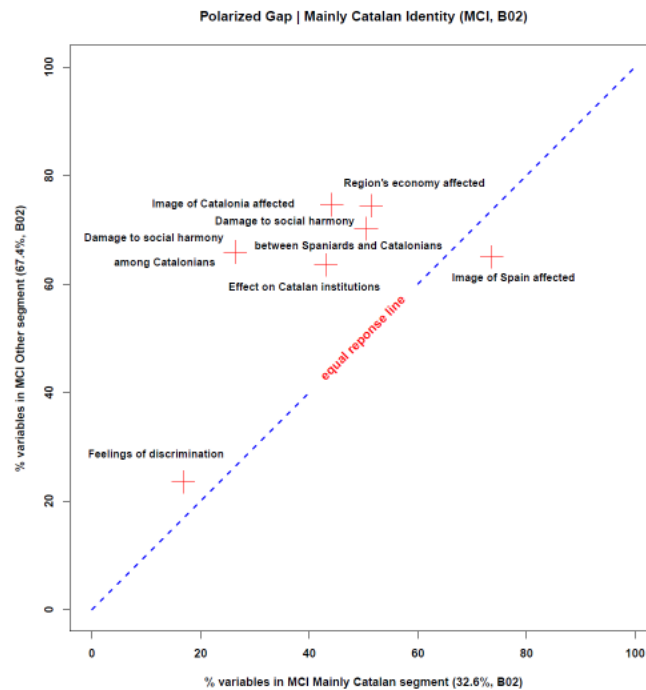
**Figure 3.** “Polarized gap” plot distinguishing between participants with different mother languages (Q03.2) in relation to some relevant variables. The surveyed population was segmented into two large groups according to their mother language—Catalan or Spanish. Each variable is depicted by a red cross. The further each variable is from the bisector of the figure, the more diverse the opinions of both groups regarding it are. Thus, for the variable “damage to social harmony among Catalonians”, the group with Spanish as their mother tongue agreed in 65% of the cases, compared to 29% in the group whose mother tongue was Catalan.

**Table 4.** Association coefficients between Catalonians with different “feelings of national identity” segments and each of the remaining variables surveyed. (These denote different opinions, preferences, and traits derived from a GAD-3 survey in December 2020 with a sample size of  $n = 1002$  (or  $n = 402$  for a group of variables) Catalonian residents. The variables are grouped in consideration of their nature, and each group is presented in descending order, from the top down, of its association magnitude, as measured by the contingency coefficient,  $C$ . Only the variables of “gender” and “first language in school” present an insignificant stochastic dependence on “feelings of national identity”, while all of the remaining variables exhibit a clear stochastic dependence on this variable.)

Variable	$\chi^2$	<i>d.f.</i>	<i>p</i> -Value	<i>C</i>
<b>Language variables</b>				
Q03.1 Family Language	439.2	15	$\leq 10^{-16}$	0.6374
Q03.2 Mother Language	375.8	15	$\leq 10^{-16}$	0.6031
Q03.3 Writing Language	348.8	20	$\leq 10^{-16}$	0.5681
<b>Origin and nationality</b>				
B01 Family Origin	309.7	10	$\leq 10^{-16}$	0.5951
Q21 Nationality	187.1	15	$\leq 10^{-16}$	0.4580
<b>Education Language Issues</b>				
Q09 Education Authority	187.9	20	$\leq 10^{-16}$	0.6277
Q05 Public Education Language	220.9	20	$\leq 10^{-16}$	0.4752
Q07.3 Education basically in Catalan is detrimental from labour point of view	92.6	25	$\leq 10^{-8}$	0.4712
Q06 Public Education Language Format	212.6	25	$\leq 10^{-16}$	0.4583
Q07.2 Education system generates detrimental effects to non catalan mother language students	79.0	25	$\leq 10^{-6}$	0.4412
Q07.4 Common Spanish exam	39.0	25	0.0370	0.3234
07.1 First language in school	32.8	25	0.1374	0.2986
Q08 Textbooks language	27.9	15	0.0225	0.2918
<b>Opinion on the secession campaign (<i>procés</i>)</b>				
Q14.1 Damage to social harmony among Catalonians	188.1	10	$\leq 10^{-16}$	0.4869
Q11 Image of Catalonia affected	159.0	15	$\leq 10^{-16}$	0.4273
Q10 Region’s economy affected	118.7	15	$\leq 10^{-16}$	0.3758
Q13 Effect on Catalan institutions	88.6	15	$\leq 10^{-11}$	0.3291
Q16 Linguistic fines	59.7	10	$\leq 10^{-8}$	0.2905
Q14.2 Damage to social harmony between Spaniards and Catalonians	59.4	10	$\leq 10^{-8}$	0.2898
Q12 Image of Spain affected	29.5	15	0.0138	0.1953
Q15 Feelings of discrimination	26.0	10	0.0038	0.1947
<b>Reference population variables</b>				
Q17 Left-Right Ideology	146.1	25	$\leq 10^{-16}$	0.3908
Q19 Labour status	59.9	30	0.0009	0.2603
Q20 Level of studies	46.0	10	$\leq 10^{-5}$	0.2565
Q02 Categorized Age groups	48.6	15	$\leq 10^{-4}$	0.2484
Q01 Gender	3.7	5	0.5905	0.0860



**Figure 4.** Differences between Catalonians sorted by their “feelings of national identity” segment and each of the remaining variables surveyed. The numerical values and lengths of the bars correspond to the contingency coefficient C reported in Table 4. Variables are sorted by their C values. The different colours of the figures correspond to p-values that are less than 0.001 (red), between 0.001 and 0.01 (magenta), between 0.01 and 0.05 (black), or just over 0.05 (blue).



**Figure 5.** “Polarized gap” plot showing the most relevant differences distinguishing participants self-identifying as “mainly Catalan” with respect to the other “feelings of national identity” via several variables. The population was segmented into two groups according to their feelings of national identity: “mainly Catalan identity” (responders with either “only Catalan” or “more Catalan than Spanish” identities) versus the opposite segment. Each variable is represented by a red cross. The further each variable is from the bisector of the figure, the more different the opinions that each group had with respect to it. Thus, for the variable “damage to social harmony among Catalonians”, the “mainly Catalan identity” group agreed in 26.4% of the cases, compared to 65.9% in the group with other feelings of national identity.

#### 4. Discussion

The main findings can be summarized as follows. The “*mother language*” segmentation (Catalan language vs. Spanish language, the essential divide in the region) clearly differentiates among the surveyed individuals via their usual linguistic habits in most ordinary living contexts, their preferences regarding the “*immersion educational system*” currently applied in Catalonia in terms of the options and policies related to it, and their opinions about the social, political, and economic consequences of the recent pro-secession campaign and its divisive and damaging effects. Such distinctive profiles, which were mainly dependent on the persistent ethnolinguistic divide (mother language + family origin), were corroborated by further comparisons made by segmenting by feelings of “*national self-identification*”. The opinion with the highest differentiating weight was either asserting or denying the “*damaging effects on social harmony*” in the region of the sustained pro-secession campaign.

Several aspects common to the entire sample should be highlighted. First, despite the patterns of differences between participants with Catalan vs. Spanish as their mother language, both population segments concurred that the first language of contact at school for their children should be their mother language. Second, both groups gave considerable and similar support to a bilingual (Catalan and Spanish) or trilingual education (Catalan, Spanish, and English), with an equal balance among these languages throughout the curricular advancement. Third, these general preferences again showed that only a minority agreed with the immersion educational system currently applied in Catalonia (Miley and Garvía 2019; Garvía and Santana 2020). Fourth, regarding the preferred writing habits in the Catalan or Spanish languages, there was a clear preference for the mother language, although a significant fraction of participants with Catalan as their mother language commonly used Spanish as their preferred writing language.

These findings show a pattern of opinions that contradict the current *immersion educational language policy* in Catalonia, though the survey did not directly address this. Most respondents, however, did not consider that such an educational linguistic policy was detrimental to or harmful for career or professional prospects, and a perception of discrimination for linguistic reasons was mostly absent. Additionally, both the population segment with Catalan as their mother language and that with Spanish expressed agreement on a common final test of Spanish language ability to evaluate skill levels. Both groups were opposed to fines for businesses for not labelling products in Catalan. There were differences, however, in opinions on whether the highest educational authority should correspond to the central or the regional government. Finally, it is noteworthy that the majority of participants with Spanish as their mother language felt “*as Catalan as Spanish*”, while participants with Catalan as their mother language self-identified mostly as “*only Catalan*” or “*more Catalan than Spanish*”.

According to the most recent survey of common linguistic uses in the region (Idescat 2018 (EULP2018-Enquesta Usos lingüístics de la població, Institut Estadístic Catalunya (<https://www.idescat.cat/pub/?id=eulp> (accessed on 22 August 2021))), the most common languages of the Catalonian citizenry are Spanish (56%), Catalan (36%), both Spanish and Catalan (6%), and other languages (5%), including Arabic, Italian, Urdu, Romanian, English, Chinese, French, Amazigh (Berber), and other languages. Concerning spontaneous writing habits and preferences, the present study showed that, for an important number of participants, their ordinary writing language was Spanish (61.8%), while 15.9% wrote in Catalan, and writing in both languages was done by 20.1%. These percentages were for the entire population. When considering distinctions obtained via the “*mother language*” segmentation (Figure 4), different proportions were derived, though Spanish was still the main writing language for 27% of participants with Catalan as their mother language. Moreover, in this linguistic segment, 28% declared that they usually write in either Catalan or Spanish arbitrarily.

Regarding distributions by age, the group with Catalan as their mother language contained a higher proportion of pensioners and a lower proportion of young people.

Moreover, the proportion of those with an “only Spanish” national identity was higher in the younger group compared to the older ones (Figure S3). The younger groups also seemed more sensitive to perceive damage to social harmony among Catalonians and to declare feelings of being discriminated against by current linguistic policies. They were also more critical of the educational linguistic system imposed by regional authorities (Figure S3). Additionally, the population segment who identified clear damage to social harmony in the region as a result of the forceful pro-secession campaign appeared to be more sensible to the detrimental aspects of the current linguistic policy and did not approve of language-based fines (Figure S4). Thus, the present results do not show support for the current *immersion educational linguistic policy* in any of the sub-groups considered (not even in participants with Catalan as their mother language).

The present findings came from an isolated survey regarding opinions/preferences related to the current educational linguistic system and the governance policies related to it, and they concur with the results of previous studies that inferred a gap between citizens’ preferences and the prevailing linguistic and educational policies in Catalonia (Vilarrubias 2018; Miley and Garvía 2019; Calero and Choi 2019; Garvía and Santana 2020). They describe a situation in which a majority of the Catalonian citizenry is subjected to a linguistic “*educational immersion system*” that does not appease their linguistic preferences for school programs. Such an “*educational immersion system*” was also perceived as potentially detrimental by non-negligible segments of the surveyed sample (see Figures S2 and S3).

Amiable coexistence between the Catalan and Spanish languages—which are not so distant, as both languages come from Latin and were born in neighbouring pre-Pyrenean regions in the early Middle Ages—is an undeniable fact of daily life in Catalonia. Easy coexistence, however, does not remove the competition that inevitably arises in societies with several official languages (Soler-Carbonell et al. 2016). This probably explains why the political intervention of regional powers into school programs and curricula has been one of the areas of greatest political debate (Huguet et al. 2013; Soler-Carbonell et al. 2016; Woolard 2016; Vilarrubias 2018; Miley and Garvía 2019; Calero and Choi 2019; Garvía and Santana 2020).

The frequent presentation of the linguistic educational immersion system in Catalonia as an example of a “successful policy” that promotes both social cohesion and opportunities for advancement in the job market with greater earning potential (Capellari and Paolo 2015) not only lacks robust endorsement by a sufficient body of empirical evidence (Woolard 2016; Vilarrubias 2018; Oller et al. 2020), but also contradicts repeated surveys exploring citizens’ preferences regarding linguistic education systems in schools (Miley 2013; Miley and Garvía 2019; Garvía and Santana 2018, 2020). The aforementioned findings regarding the effects of the immersion system on school performance (Calero and Choi 2019) provide a warning about the non-trivial negative effects on overall academic performance for students coming from homes where Catalan is not the family language. It is worth remembering that this includes the majority of households in the region, and also that the Catalonian High Court has indicted the regional government for not securing the minimal number of hours of Spanish language teaching, as fixed by law, throughout the network of public and subsidized schools (see: Ríos (2020) La justicia obliga a un mínimo del 25% de enseñanza en castellano en Cataluña: una sentencia del Tribunal Superior Catalán considera “residual” el uso que se hace ahora de esta lengua, *El País*, 17th December, <https://elpais.com/espana/catalunya/2020-12-17/el-tsjc-obliga-a-un-minimo-del-25-de-ensenanza-en-castellano.html> (accessed on 22 August 2021)). These factors define the immersion educational linguistic system currently applied in Catalonia as “parochial”, since, whether by deliberate design or not, it appears to facilitate the advancement of a particular (linguistic) sector of the community, and not the whole citizenry. (The Catalonian language immersion system advocates the promotion of a fair bilingual society wherein the regional language (Catalan) might achieve an equal status and competitive use in society (as Spanish). Although the Catalonian case has often been considered

a success in terms of language policies (Arнау 2013; Vila 2020), this does not preclude its deleterious effects, particularly for some communities, which deserve attention.)

Finally, the present findings highlight the persistence of an ethnolinguistic divide between two neighbouring communities, which has probably functioned as the main point of contention in the debate created by the sustained and essentially top-down pro-secession campaign, which lacks the support of a social majority (Elliot 2018; Miley 2007, 2013; Miley and Garvía 2019; Baldoli and Mocca 2021; Oller et al. 2019b, 2020; Tobeña 2017, 2021). It does so despite the repeated but unsubstantiated scholarly attempts to deny its relevance (Vergés-Gifra and Serra 2021). Mother language and the origin of the family were amongst the main factors behind distinctive preferences and opinions highlighted by the findings of this study. Their strong association with clear distinctions in feelings of “national identity”, along with similar profiles of preferences regarding educational and socio-political issues, reinforces that conclusion. The importance of the ethnolinguistic divide is perhaps so salient as to have become the basis for the structure of the linguistic educational system in the region—a system that may be having subtle but measurable deleterious effects on a substantial fraction of the Catalonian citizenry, though discrimination for linguistic reasons was not perceived as a relevant issue.

As this study was based on a single but representative survey, it is an obviously provisional and limited picture. It confirms, however, previous survey findings that showed that the educational immersion system applied in Catalonia clashes with the general preferences of the citizenry on linguistic issues (Miley and Garvía 2019; Garvía and Santana 2018, 2020). It adds, moreover, complementary information to findings derived from different approaches and methods that described the challenging nature, particularly for non-native Catalonian citizens who have migrated from many regions, of the learning scenarios created by the educational immersion system prevailing in the region (GAD3 2015; GESOP 2017; Byrne 2020; Bretxa et al. 2016; Huguet 2014; Huguet et al. 2013; Ianos et al. 2017a, 2017b; Lapresta-Rey et al. 2017). It finally confirms the depth of the divide between pro-secession and anti-secession citizenries, since the issue that most clearly separated them (after their regular speaking and writing habits and family origin) was their opinion about “*the damage to social harmony among Catalonians*” that the secession campaign has caused (Oller et al. 2019a, 2019b; Tobeña 2021). Thus, the present study re-affirms and expands on previous diagnoses of the same general issue and extends them to the highly entrenched and chronic social division that has followed the failed push for independence in autumn 2017.

**Limitations of the study.** The present results come from a single survey, which is inevitably subject to sampling errors and some already-stated restrictions. In any case, our findings are compatible with those of previous surveys carried out on the same general topic in comparable samples (see, in particular, the GESOP (2017) and GAD3 (2015) studies). At the same time, this demands that further studies be carried out using similar surveying approaches that are iterated over a relevant time period in order to analyse the consistency of the patterns. Alternatively, questionnaires should be combined with other methodologies to discern, for instance, between openly asserted linguistic preferences and barely conscious linguistic automatisms in fully bilingual populations (Ianos et al. 2020; Aznar-Casanova et al. 2020) in order to complement the profiles described here.

We applied basic and simple statistical techniques in this analysis, as the data came from a survey that was performed at a given time. Taking the considerable number of contrasts analysed into account—over 50—it would be preferable to apply conservative Bonferroni corrections. The significance levels should be of the order of 0.05 divided by the number of comparisons. For 50 comparisons, significance levels of the order of 1‰ should be employed. Hence, only differences fulfilling such criteria should be considered sufficiently reliable, such as the series of contrasts presented in the tables and figures. However, the statistically non-significant dependences also provided interesting clues.

**Supplementary Materials:** The following are available online at <https://www.mdpi.com/article/10.3390/genealogy5030077/s1>: The same general approach was applied to segmentations by age groups (Q02, see Survey Questions), which were categorized into four groups: 18–29 years, 30–44 years, 45–64 years, and 65 or older, as well as to the variable “Do you think that the secession bid had seriously damaged the social harmony among Catalanian citizens?” (Q14.1, see Survey Questions), with three possible answers: “YES”, “NO”, or “DK/NA”. We have not displayed all the results, though the SI provides additional bar diagrams for several variables, thus allowing for further comparisons. These modified bar charts illustrate relevant comparisons for different segments of the sample, sorted by “mother language” (Figures S1 and S2) and “age segments” (Figure S3), and for contrasts corresponding to segmentation via opinions on “damage to social harmony” (Figure S4) and the national identity of “only Catalan” (Figure S5). The width of the bars is proportional to their frequency in the sample. A measure of two standard error of frequency estimates is also indicated, supplying an approximate 95% confidence interval.

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**Ethics:** As stated: The data for this research came from phone surveys performed by the private polling institute GAD3 (<https://www.gad3.com> (accessed on 22 August 2021)), complying with Spain’s full legal requirements and restrictions related to conducting sociological studies on voting behaviour and political opinion, and in accordance with the *ESOMAR International Code on Market, Opinion and Social Research, and Data Analytics*. The anonymous poll was conducted by live interviewers; 50% was conducted by landline phone and the other 50% by mobile phone. The contacted individuals were free to refuse to answer the survey, and there were no questions regarding the personal features of responders, who had a full guarantee that their responses would be treated as untraceable numerical scores within a unique sample while preserving full anonymity. The researchers were allowed access to the datasheets containing the raw scores of the survey under totally blind conditions concerning the identities of the surveyed participants, who could not be traced in any way. All of the statistical analyses included in this paper also fulfilled the conditions established by the Ethical Commissions of the University of Barcelona, Pompeu Fabra University, and the Autonomous University of Barcelona for the treatment of human data, as their original sources were surveys taken by official agencies or private firms subjected to specific external regulations and the relevant guarantees. As such, ethical approval was not required for this secondary analysis of the data, as per the authors’ institutional and national regulations.

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