

The intensity and nature of linguistic segregation in Catalan schools

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Resum

The article we present is based on the research: School segregation processes in Catalonia (2007, Editorial Mediterrània), which we carried out in 10 Catalan municipalities to find out the levels of segregation existing in the different schools (in P3, the point when pupils are incorporated into universal schooling), according to the parents' education levels, origin and language used at home. Of these three variables, to date we have not exploited the one referring to the language used at home. So, the purpose of the article is to approach the segregation occurring according to language in these Catalan municipalities. Beyond this first descriptive look at the Catalan situation, we also plan to relate the linguistic composition of schools to their social composition, according to the family's (mother's and father's) level of education, to find the point to which this is a key explanatory factor. Thirdly, we also want to know the way in which the overall characteristics of the municipality (overall volume of Catalan-speakers, level of education, volume of immigrants) affect both the existing levels of linguistic segregation and explain any segregation in terms of academic status. The theoretical basis of this article stems from two considerations. Firstly, providing a fresh look and empirical data concerning the correlation between language and social status in Catalan school, and, secondly generating knowledge about the different densities of Catalan-speakers and Spanish-speakers in areas where the country is socially mixed. Of these, schools emerge as a key area because of its strategic potential in the establishment of informal links between people from different social and linguistic situations.

Sumari

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1. Introduction. The concept of linguistic segregation

The aim of this article is to explore the extent and features of linguistic segregation in the Catalan school system. The concept of linguistic segregation has so many connotations and meanings that we will start by defining what we mean (and do not mean) when we use the term. Firstly, by linguistic segregation we do not mean an intentional and discriminatory process of linguistic exclusion on the part of school service providers, whether public or private. The Catalan school system is not linguistically segregated or segregating - there are no pupil selection processes based on linguistic skills or language background. Nor do we understand by linguistic segregation the provision of a dual school network with Catalan or Spanish as the medium of instruction, leading to an academic separation of the two linguistic communities, whether desired or otherwise. In fact, the Catalan system of language combination is built on the assumption that Catalan is the only medium of instruction in schools. In terms of this second definition, the Catalan school system could be regarded as being designed to prevent segregation, as it seeks to eliminate the language factor in the assignment of pupils to schools, whether through the decisions of the education provider, or as an effect of parental choice.

The third definition of the concept is the one which we will use in this article. It defines linguistic segregation as the uneven distribution of pupils between schools according to the language(s) they use at home. We are not, therefore, referring to intentional segregation or a segregational model, but to a segregating effect on the distribution of pupils in the school system. In this sense we cannot refer to segregation as a feature which the system may or may not have, but rather as something that has certain features and exists to varying degrees.

The article's key interest lies in the fact that the different types of segregation that we find in schools - social, linguistic, origin, etc. - have significant social consequences. The school

defines equality of opportunity and social cohesion as guiding principles. From our point of view the most significant type of segregation in schools affecting these objectives is that related to the educational background of the families - social segregation. The fact that in some schools there is a concentration of families with higher studies, while in others there are hardly any families with studies beyond compulsory education, establishes unequal educational contexts, which make the achievement of the goals specified above more difficult.

However, apart from social segregation based on the parents' level of education, there are other types of segregation which have socially undesirable effects. The first effect of linguistic segregation, which is what concerns us here, is that it interferes with the achievement of language immersion in Catalan. Processes of linguistic segregation which lead to a minority presence of Catalan-speaking pupils in schools hinder the normal use of Catalan in informal relations between the children. When linguistic segregation produces schools with (practically) no Catalan-speaking pupils, the potential instrumental and symbolic distancing of the pupils from Catalan can have other consequences apart from the failure to use it in informal relations at school.¹ Furthermore, the fact that social and linguistic segregation may coincide, and we propose to highlight the power of this combination, can lead to a disadvantageous structural situation (because of the absence of peers with a family background of post-compulsory education) which tends to limit involvement with the school, to which we would need to add the lack of opportunities for language development in the school's medium of instruction outside a strictly academic context. This has consequences for the achievement of language competence and the social perception of both the language and its speakers; they tend to be perceived as "other", distant and foreign (González, 2008; Martínez, 2008) Beyond its effects on normalising the use of Catalan, the existence of schools in which Catalan speakers are very much in the minority (especially those cases in which the families' educational background is limited) also has negative effects in the area of social cohesion, equality of opportunity in education, and future socio-professional opportunities.

For its empirical basis this article draws on the field work carried out for the research project *Processos de segregació escolar a Catalunya* (Processes of segregation in schools in Catalonia)² (Benito and González, 2007). The field work consisted in giving a short questionnaire to the families of pupils in the third year of primary school in 10 Catalan municipalities,³ with the aim of determining the distribution of the pupils among the schools in these municipalities, according to certain key variables related to their families.⁴ In this article we focus on one of these variables: the language (or languages) used by the family unit at home.

The selection of the municipalities in the sample is of vital importance in supporting the supposition that the results of the research present a reliable picture of segregation in schools in Catalonia in general, and linguistic segregation in particular. In this sense the choice was intended to provide a wide range of situations, according to the size of the municipality, its sociodemographic profile, and its location in Catalonia. In linguistic terms, the municipalities chosen correspond to three distinct profiles: a) municipalities with more pupils who use Catalan exclusively at home than Spanish (henceforth, Catalan-speaking municipalities); b) municipalities with similar numbers of pupils who use Catalan and Spanish exclusively at home (bilingual municipalities), and c) municipalities with a (much) larger

¹ The limited use of Catalan in the informal relationships of children and young people in environments without a clear majority who speak Catalan as their first language may be an indication of the progressive weakening of Catalan or a phenomenon based on a combination of circumstances which is modified when the subject grows older and comes into contact with new social contexts. There are situations in schools which may seem similar, because Spanish predominates in informal use among pupils, but which in fact involve very different levels of familiarity with Catalan and which potentially have significant future consequences for the use of Catalan in everyday situations.

² Research financed by the Jaume Bofill Foundation and the Barcelona Provincial Council Education Department, and carried out by the Education Department of the *Institut de Govern i Polítiques Públiques* (IGOP) at the Autonomous University of Barcelona.

³ Information was also collected on pupils in the fifth year of primary school in two of the municipalities, to analyse the changes which had taken place in the scheme for school catchment zones. In this article we consider the results from 9 of the municipalities. The numbers responding ranged from 65% to 100% of the pupils' parents, depending on the municipality.

⁴ The most important data concerned the parents' level of education, the parents' and the pupil's country of birth, and the languages used at home.

proportion of pupils who use Spanish exclusively at home (Spanish-speaking municipalities). This third profile can be seen in many large towns and cities in Catalonia, especially those located in the Barcelona metropolitan area, where a large part of the Spanish-speaking population is concentrated (although in many of them the difference between the numbers of Catalan speakers and Spanish speakers is less pronounced). The following table shows the distribution of languages used at home by the pupils in the different municipalities covered by the survey.⁵

Table 1. Intensity of linguistic segregation and incidence of residential segregation

Municipality	Type of municipality	Language used at home				
		% Catalan	% Spanish	% Catalan and Spanish	% other	Total
A	<i>Catalan-speaking municipalities</i>	59,7	16,2	12,4	11,7	100
B		56,2	9,5	5,5	28,8	100
C		45,6	11,9	20,7	21,8	100
D		43,4	29,6	20,9	6,1	100
E	<i>Bilingual municipalities</i>	35,9	35,8	20,2	8,1	100
F		35,4	32,7	21	10,9	100
G	<i>Spanish-speaking municipalities</i>	16,6	59,2	14	10,2	100
H		13,6	61,7	20,3	4,4	100
I		11,7	61,5	25,7	1,1	100

2. Intensity of linguistic segregation and incidence of residential segregation

As we shall see below, the key variable throughout our analysis is the percentage of pupils who use Catalan at home, whether exclusively or together with other languages (mainly Spanish). The reason for prioritising this category lies in the supposition that these pupils have a high degree of familiarity with the Catalan language, which can favour its informal use among peers. We have, therefore, opted to consider as a group those cases in which Catalan is present in the child's home background, allowing for the fact that he/she may be familiar with the use of other languages. When we use the category Catalan-speaking pupils, we shall henceforth be referring to those cases in which Catalan is used in the home, whether or not it is used exclusively.

The classification of municipalities given above shows the first factor in linguistic segregation in the Catalan school system: the differences between municipalities regarding the proportion of pupils who speak Catalan at home. As is logical, the proportion of pupils with this profile that we find in each school clearly depends on the number in the whole municipality. Of the categories referred to (Catalan-speaking, bilingual and Spanish-speaking municipalities) the first two have average numbers using Catalan at home in excess of 50%. The average is 65.7% for Catalan-speaking municipalities and 56.2% in bilingual municipalities, whereas in Spanish-speaking municipalities the average is considerably lower, at 31.4%. This distribution of pupils shows how Catalan is a minority language in the third type of municipality. In such municipalities, if Catalan-speaking pupils were evenly distributed, they would constitute a minority of the pupils in all schools, while, if the distribution is highly segregated, Catalan-speaking pupils will tend to concentrate in a minority of schools where there is a Catalan-speaking majority, a situation which does occur in some cases, as we shall see.

We can thus see that the observation of Albert Bastardas regarding the influence of residential segregation on linguistic segregation in Catalonia is substantially correct: *"The residential concentration and resulting quasi-segregation of many Spanish-speaking individuals in Catalonia is a characteristic feature of the Catalan situation. The demo-*

⁵ It should be noted that the percentages do not give an exact representation of the language profile of all the pupils in the municipalities but only of those pupils attending the third year of primary school. There may also be families with a particular language profile living in the municipality who send their children to school in other municipalities (as we shall see below, this is a notable phenomenon in two of the municipalities in the study).

linguistic composition of schools in Catalan metropolitan areas logically reproduces that of society in general, and that of the district or area in particular" (Bastardas, 2002:5). There is certainly a linguistic segregation associated with residential segregation -both between and within municipalities- which has a notable effect on the linguistic make-up of schools. However, as we shall see, language segregation in the school system is not explained only by residential segregation.

To appreciate the intensity of linguistic segregation in schools we will start by using indices of segregation. These indices range from 0 (a situation in which we find no segregation, which means that the distribution of the sub-group studied is proportional to the distribution for all the schools in the universe) and 1 (maximum segregation possible, which means a distribution of the sub-group of population which is as disproportionate as possible, concentrating all the members of the sub-group in the smallest possible number of schools). It should be pointed out that the index of segregation is an eminently comparative measurement, which serves above all to compare the intensity of the phenomenon in different municipalities. The table below shows some indices of linguistic and social segregation (as mentioned above, by social segregation we mean segregation stemming from differences in the parents' level of education) in different municipalities:

Table 2. Indices of segregation in schools by municipality according to language and educational background

Municipalities	Indices of segregation in schools				
	Language segregation			Social segregation	
	Catalan speakers	Spanish speakers	Other languages	Compulsory education or less	Higher studies
A	0,38	0,19	0,51	0,41	0,24
B	0,2	0,28	0,19	0,29	0,36
C	0,53	0,4	0,53	0,35	0,69
D	0,3	0,31	0,2	0,22	0,26
E	0,39	0,28	0,63	0,31	0,34
F	0,39	0,43	0,35	0,36	0,18
G	0,56	0,38	0,59	0,47	0,54
H	0,24	0,19	0,48	0,21	0,15
I	0,1	0,1	0,79	0,24	0,3

In the above table we may first observe that the indices of segregation differ markedly from one municipality to another, and among municipalities with the same linguistic profile. Although intermunicipal residential segregation affects the linguistic segregation of pupils, there are other phenomena which clearly affect the uneven distribution of pupils in each municipality, independently of the concentration of Catalan speakers. The indices would appear to reflect considerable levels of segregation in a high proportion of municipalities. The contrast between linguistic segregation and segregation based on levels of education is particularly significant, as it enables us to see the magnitude of the issue. The conclusion is very clear: in general, levels of linguistic segregation in these municipalities are no less marked than those of social segregation. Furthermore, the intensity of linguistic segregation and social segregation tend to go hand in hand, so that municipalities with a high level of one type of segregation tend to record high levels in the other.⁶

These trends advise us, albeit indirectly, of the high probability that linguistic segregation in schools in the municipalities will be heavily conditioned by social segregation. This hypothesis is examined in greater depth below.

In addition to this first reading on a general level, we can make some more specific observations. The first is the fact that the highest levels of linguistic segregation are related

⁶ This does not occur with the linguistic segregation of pupils who use other languages at home. This type of segregation is explained by a different series of factors: those peculiar to the segregation of a population of foreign origin (Benito and González, 2007).

to families who do use neither Catalan nor Spanish at home. In these cases, if we exclude municipality B, which has a policy for the distribution of pupils of foreign origin which has been agreed by all the schools, and municipality D, where the immigrant population is low, all the indices are notably high and reflect a clear tendency for immigrant pupils to be concentrated in a small number of schools. Secondly, in most municipalities, we detect a clear tendency for the concentration of the Spanish-speaking and/or Catalan-speaking population. In addition, in two of the municipalities where levels of segregation are lowest (H and I), we find a phenomenon which artificially reduces levels of segregation: some families with a medium-high socioeconomic status send their children to grant-maintained schools in neighbouring municipalities (we will return to this question in due course).

To explain the intensity of *intra-municipal* linguistic segregation, we must turn again to residential segregation. Residential segregation partly explains both linguistic and social segregation in the schools of certain municipalities (especially municipality G, with one of the largest populations in Catalonia, where there are substantial sociodemographic differences between districts and residential areas), but this is only a partial explanation, and, in some municipalities with high levels of segregation, a secondary explanation. Social segregation in schools is often not only an effect but also a cause of residential segregation, since the family's decision about where to live is conditioned by the sociodemographic environment of districts or towns, which then tend to become progressively homogenised. Residential segregation, even when it correlates with social segregation,⁷ may not be so much a cause as an effect, especially in a historical context of great residential mobility, as has occurred in recent years.

It is true, furthermore, that parents' preference for enrolling their children at a school near home does not carry much weight if the local school is not considered satisfactory, especially among families with a higher socioeconomic (or academic) status. The family's choice of a grant-maintained school reveals clear limitations to the explanation of segregation by residential factors, especially the segregation of sub-groups associated with high status. (Benito and González, 2008). To the extent that there is a correlation between the linguistic and social composition of schools, the causal link between residential segregation and linguistic segregation is weakened. Finally, many small and medium municipalities have a catchment map for schools which allows, or at least would allow, policies for assigning pupils to schools which are very little influenced by residential segregation.

As the foregoing paragraphs suggest, an understanding of the intensity and the morphology of linguistic segregation in schools calls for a study of the extent to which social and linguistic segregation in schools are linked. Before undertaking this, however, we present a contingency table which clearly illustrates the levels of linguistic segregation which we have been discussing. This table shows the distribution of Catalan-speaking pupils among schools, based on a grouping of the schools by quartiles. In the first quartile we find schools with less than 25% of Catalan-speaking pupils, in the second schools where there are between 25% and 50%, in the third schools which have between 50% and 75%, and in the fourth those schools where Catalan-speaking pupils account for over 75%. We shall also refer to the third quartile as the quartile of suitability, as it is the one reflecting what we would consider a priori to be the minimum proportion of Catalan-speaking pupils needed to generate everyday use of Catalan in the school's informal activities.⁸ The quartile in which we find the mean

⁷ While we can see that social and linguistic segregation are linked, this finding places limits on the explanation of residential segregation as causing linguistic segregation.

⁸ The article by Albert Bastardas referred to above points out that the empirical evidence available to us shows how in school environments where Spanish is the mother tongue of the majority of pupils, or is on a par with Catalan, "*it always tends to be the language used in the vast majority of inter-group relations*" (Bastardas, 2002: 1). Based on this observation, we would establish as the quartile of suitability the quartile in which Catalan speakers constitute a majority, thus tending to facilitate the presence of Catalan in informal interaction. The establishment of this frontier of suitability which favours the introduction of Catalan in informal contexts is a theoretical a priori position requiring rigorous empirical evaluation. In principle, we would venture to say that it is an optimistic suitability threshold, as it presupposes that the numerical majority would be capable of offsetting the power of the two phenomena which make Spanish the informal language of preference among pupils: the lack of competence in Catalan of many Spanish-speaking children when they enter compulsory education - which means that their first communicative interaction is more likely to be in Spanish, and makes subsequent changes very difficult - and the preeminence of Spanish in many sectors of the mass media and leisure industry in early and, especially, late childhood. However, it is an optimistic assessment which may well be supported by certain recent structural developments which limit the effect of the two factors referred to. On the one hand, the progressive growth of schooling for children aged 0 to 3, often

percentage of Catalan-speaking pupils for the municipality will be referred to as the *mean quartile*.

Table 3. Percentage of pupils in schools according to linguistic composition (by quartiles)

Linguistic composition of schools (% of Catalan speakers)	Type of municipality			Total
	Spanish-speaking municipalities	Bilingual municipalities	Catalan-speaking municipalities	
0-25%	44,3	14,1	5	25,2
25-50%	35,1	15,3	10,6	22,8
50-75%	13,2	42,7	46,6	31
75-100%	7,3	27,9	37,9	21
Total	100	100	100	100

The percentage of Catalan speakers in the different municipalities ranges from 34% to 72%. The fact that schools with less than 25% (first quartile) and over 75% (fourth quartile) of Catalan speakers together constitute 46% of all schools in itself indicates a significant imbalance in the distribution of pupils. However, to be analysed with precision, the data must be set against the linguistic composition of the municipalities. Collective data is provided for all types of municipality, as it corresponds to relatively homogeneous profiles of linguistic distribution, enabling us to give a more synthetic reading of the different scenarios we can find in Catalonia. If we consider the data for each group of municipalities, the imbalances are still marked. The factor which best reflects this is that in all three types of municipality less than 50% of pupils attend schools in the respective mean-quartiles (second quartile in Spanish-speaking municipalities, quartile of suitability in the others), these being the quartiles where we would find 100% of the pupils in the municipality if they were evenly distributed.

In municipalities classified as Catalan-speaking and bilingual, we find a similar situation. In both cases the mean quartile and the quartile of suitability coincide, meaning that all pupils could be attending school in language environments which clearly favour familiarity with Catalan as a language for informal communication. Even so, a significant minority of pupils attend schools where Catalan occupies a more dominant position (fourth quartile)⁹, while another significant minority attend schools where Catalan speakers are in the minority: 15.6% in Catalan-speaking municipalities and 29.4% in bilingual municipalities.

However, the greatest imbalance is found in Spanish-speaking municipalities, where there are more pupils in the first quartile than in the second quartile (mean quartile), where Catalan speakers are a much stronger minority. Practically two thirds of the pupils fall outside the mean quartile, while only 13.2% of the pupils are to be found in the *quartile of suitability*, although the percentage could, potentially, be over double this figure. In Spanish-speaking municipalities the distribution does not favour the greatest presence possible of Catalan-speaking pupils in all schools (all the pupils in the second quartile), or the alternative distribution which maximises the number of pupils (from 25% to 30%) in the quartile of suitability. We would view the latter model as undesirable, as it would leave the remaining pupils in schools where there were hardly any Catalan speakers; this now applies to 44.3% of schools and the number would increase to approximately 70%.

with Catalan as the medium of instruction. On the other, the importance of Catalan as the medium of communication for a substantial proportion of children's cultural intake in early childhood. In any case, the establishment of the suitability quartile allows us to diagnose linguistic segregation in Catalan municipalities, and the scope for manoeuvre to generate areas of interaction which are more likely to consolidate the informal use of Catalan among children.

⁹ This is probably an undesirable situation for pupils to become fully competent in the use of Spanish, especially in municipalities where Spanish has minimal presence not only at school but also in other everyday situations.

3. Relationship between the linguistic and social composition of schools

In this section we will examine the relationship between the linguistic composition of schools and their social composition, interpreted in terms of the level of education of the pupils' parents. Applying the same grouping by quartiles as in the preceding section, Table 4 shows that, in the different linguistic contexts of the municipalities, we find higher levels of education for the families in the schools in the highest quartile. It will also be seen that the schools with the lowest proportion of Catalan speakers are also those whose pupils' families have the poorest educational background. There are also some differences between the schools in the two middle quartiles, but they are less significant. The results portray a clear relationship between the linguistic and social composition of those centres that have a more homogeneous linguistic composition, either because Catalan-speaking families are in a small minority (less than 25%) or because they constitute a clear majority (over 75%).

Table 4. Percentage of pupils in schools according to linguistic composition (by quartiles) and family educational background

Type of municipality	Family educational background	Linguistic composition of schools (% of Catalan speakers)				
		0-25%	25-50%	50-75%	75-100%	Total
<i>Spanish-speaking municipalities</i>	Compulsory education or less	58,6	35,5	28	10,8	43
	Post-compulsory education	32,7	43,2	50	27,3	38,1
	Higher education	8,7	21,2	22	61,9	19
	Total	100	100	100	100	100
<i>Bilingual municipalities</i>	Compulsory education or less	67,4	49,3	39,7	19,6	39,5
	Post-compulsory education	27,3	35,2	33,9	39,2	34,7
	Higher education	5,3	15,5	26,4	41,2	25,9
	Total	100	100	100	100	100
<i>Catalan-speaking municipalities</i>	Compulsory education or less	86,8	62,7	54,6	37	50,7
	Post-compulsory education	13,2	22,9	25,8	37,3	29
	Higher education	0	14,5	19,7	25,7	20,3
	Total	100	100	100	100	100

According to the linguistic profile of the municipality, there are some significant differences, especially between Spanish-speaking and Catalan-speaking municipalities. The schools with a higher proportion of Catalan speakers (top quartile) in municipalities with Spanish-speaking majorities have pupils with better family educational backgrounds. Care must be taken when making comparisons between different municipalities, as the weight of the different levels of studies of the families varies from one municipality to another. However, it is precisely the Spanish-speaking municipalities which have the lowest percentage of families with higher studies. As a result, the differences referred to in connection with bilingual and Catalan-speaking municipalities are particularly noticeable.

In Spanish-speaking municipalities we can distinguish two "withdrawal" strategies among families with higher levels of education. On the one hand, there is "flight" to grant-maintained schools in neighbouring municipalities, and, on the other, the concentration of some families with high levels of education in schools in their own municipality which enjoy a high level of "social prestige", mainly grant-maintained schools.¹⁰ In both cases these processes of "social withdrawal" have effects on the linguistic composition of schools. In the first case, the "flight" to neighbouring municipalities leads to a reduction in the density of Catalan-speaking families in the municipality. In the second, the process of social withdrawal

¹⁰ We do not have data on the "flight" effect in these two municipalities, as the questionnaire was only given to families whose children attend schools in the municipality. However, it is a phenomenon recorded in interviews with education staff in both municipalities as part of the research referred to above (Benito and González, 2007). In the first case, municipality H, a neighbouring municipality has a high concentration of private grant-maintained schools which pursue "excellence in education", so that they enjoy very high prestige in the Barcelona Metropolitan Area. The high cost for families of sending children to these grant-maintained schools, and the experience of educational staff of the phenomenon, suggest that the bulk of families who send their children to the neighbouring municipality have a high socioeconomic and educational status. In municipality I the "flight" to grant-maintained schools in the neighbouring municipality is also a consequence of the absence of grant-maintained schools in this municipality (all the schools are public).

to certain schools in the centre of towns and cities gives rise to cases of pronounced linguistic segregation, with over 75% of Catalan-speaking families. These two mechanisms in the choice of school lead to the generation of school contexts with a very limited number of Catalan-speaking families, as a result of their concentration in certain schools, either in the municipality itself or in a neighbouring municipality. In these municipalities a balanced distribution of Catalan-speaking pupils would produce schools where Catalan-speaking pupils were in the minority, but the process of "flight" - whether inter-municipal or intra-municipal - leaves most schools with a minimal, or even non-existent, proportion of Catalan-speaking pupils.

We will now consider the differences between municipalities regarding schools in the lowest quartile (i.e. schools with less than 25% of Catalan-speaking families). In Catalan-speaking municipalities, the educational background of pupils at schools in this quartile tends to be poorer than in other municipalities. It should be pointed out that in these municipalities, unlike Spanish-speaking municipalities, there are very few schools in this quartile. These schools are attended by 5% of the pupils in the municipality, while in Spanish-speaking municipalities these schools account for 44% of pupils. If we consider the second quartile, we also find that levels of education are proportionally lower than in Spanish-speaking municipalities. Furthermore, in the Catalan-speaking municipalities the schools in the lowest quartile have particularly low results in terms of educational background, compared with the average levels of education for the municipalities.

The fact that the schools in the first quartile (and in the second) are in a minority in Catalan-speaking municipalities may partly explain this poor educational background. In all likelihood, in bilingual and Spanish-speaking municipalities, the schools with the poorest family educational backgrounds are also in these quartiles (especially the first), but there are also schools where this tendency is less pronounced. In Catalan-speaking municipalities, on the other hand, the few schools in which the majority of pupils are Spanish-speaking tend to coincide with a lower level of parental education. In fact, the coincidence favours the stigmatisation of the schools, as the social status of their pupils' families is reflected in a clearly visible distinctive cultural trait (the use of Spanish).

As we have verified in the course of our research, the main motive of choice among families with a medium-high socioeconomic status is the social composition of centres (Benito and González, 2007). In contexts where there is a Catalan-speaking majority, the "Spanishness" of some schools may act as a symbolic marker for the presence of a significant proportion of families whose status is low. This association between Spanish-speaking schools and low status, may encourage the response of "flight" to more "Catalanised" schools among medium- and high-status Catalan-speaking families (and, to a lesser extent, non Catalan-speaking families).

Indeed, in those municipalities with a more homogeneous linguistic composition, we find educational contexts in which the connection between language and social composition is accentuated. Where Spanish is the majority language, the minority of schools with a substantial number of Catalan-speaking pupils have a stronger family educational background than in other municipalities. However, in Catalan-speaking municipalities, the connection is accentuated in the schools with fewest Catalan-speaking pupils, where the family educational background is poorer than at schools with a similar linguistic composition in other municipalities.

Finally, we present a table to verify whether, irrespective of these differences in level of education, there are also differentiated patterns of distribution according to the parents' level of education among pupils who are Catalan-speaking, on the one hand, and those who are not, on the other. For this purpose we have separated the variable for level of education into figures for Catalan speakers and for non-Catalan speakers.

Table 5. Percentage of pupils in schools according to linguistic composition (by quartiles), family educational background and language used by pupils at home

Type of municipality	Linguistic composition of schools (% of Catalan speakers)	Family educational background and language used at home						Total
		Catalan speakers			Non Catalan speakers			
		Compulsory education or less	Post-compulsory education	Higher education	Compulsory education or less	Post-compulsory education	Higher education	
<i>Spanish-speaking municipalities</i>	0-25%	26,5	19,3	8	66	49,1	37,5	44,1
	25-50%	46	43,4	37,2	28,4	41,9	49,3	37,5
	50-75%	15,9	23,7	15,6	5,3	8,1	7,4	10,5
	75-100%	11,5	13,7	39,2	3	0,9	5,9	7,9
	Total	100	100	100	100	100	100	100
<i>Bilingual municipalities</i>	0-25%	10,5	2,6	0	32,1	25	12,2	14
	25-50%	13,1	8,7	7,7	23,2	26,2	13,9	15,3
	50-75%	53,1	45,4	39,9	36,4	35,1	54,8	42,5
	75-100%	23,3	43,4	52,3	8,2	13,7	19,1	28,2
	Total	100	100	100	100	100	100	100
<i>Catalan-speaking municipalities</i>	0-25%	2,9	1,2	0	13,6	4,8	0	4,8
	25-50%	6,4	6,4	5,2	20,9	16,7	22,2	11
	50-75%	50,3	41,9	45,9	58,1	50	50	49,5
	75-100%	40,4	50,6	48,9	7,3	28,6	27,8	34,7
	Total	100	100	100	100	100	100	100

As can be seen in Table 5, in Catalan-speaking municipalities, Catalan-speaking families are distributed similarly among the different quartiles for schools irrespective of their level of studies. Although those whose studies go beyond compulsory education tend to go more to schools with a majority of Catalan-speaking pupils, the differences are not significant. However, this is not the case in Spanish-speaking municipalities, where we do find marked differences: Catalan-speaking families with higher studies send proportionally more of their children to schools with Catalan-speaking majorities than do Catalan-speaking families with a more limited educational background. Once again, we observe the mechanism of "withdrawal" in these contexts, among the Catalan-speaking families with higher status.

In the case of non Catalan-speaking families, the logic tends to be reversed. In Catalan-speaking municipalities we find significant differences according to the level of education, while in Spanish-speaking municipalities the differences are smaller. In municipalities with a Catalan-speaking majority, pupils who do not use Catalan at home are distributed differentially according to their parents' level of education, which was not the case with Catalan-speaking families. Families who are not Catalan-speaking, with a low level of studies, have a stronger relative presence in less "Catalanised" schools than families with a higher level of education. However, in Spanish-speaking municipalities, although there are some differences according to level of studies, they are minor. The main difference is the greater presence of less educated families in the bottom quartile, notably greater than that of families with a better educational background.

Another feature of note in this table is that in bilingual municipalities we also find differences according to the level of education, both among Catalan-speaking pupils and those who are not Catalan-speaking. However, these differences are less marked than those occurring in more homogeneous contexts among the minority-language group.

We can thus see that the relationship previously analysed between the social composition of schools and their linguistic composition tends to be more pronounced among the families who are in a linguistic minority in each municipality. Thus, in Spanish-speaking municipalities, there is greater differentiation in the distribution of Catalan-speaking families among the quartiles, according to their level of education, than there is among families which are not Catalan-speaking (their presence being greater in more "Catalanised" schools,

the higher the level of education). In Catalan-speaking municipalities, on the other hand, it is the non Catalan-speaking families whose distribution is differentiated according to the level of studies. Their presence is greater in schools which are less "Catalanised", the lower their level of education, while in schools with a Catalan-speaking majority we find a higher proportion of non Catalan-speaking pupils whose status is high than those of lower status. In brief: in linguistically homogeneous municipalities, the differences in distribution according to level of studies are greater among families in the linguistic minority group than in the majority group, which tends to have a distribution which is affected less by levels of education.

4. Conclusions

The data presented in this article has shown significant levels of linguistic segregation in the school system in the Catalan municipalities studied. However, levels of linguistic segregation are similar to those of social segregation, evidence that it is spontaneous, a consequence of the processes of residential segregation and the family's choice of school, which are widespread in the West, even in those education systems which, like ours, are not based on education policies which lead to segregation.¹¹

As we have pointed out in the course of this article, levels of linguistic segregation in schools cannot be explained exclusively in terms of inter-municipal or intra-municipal residential segregation, even though these are powerful factors. While both inter-municipal and intra-municipal residential segregation have a clear effect on the possibility of achieving a distribution of pupils which tends to social and linguistic heterogeneity in schools, the explanation for segregation lies elsewhere.

We have seen how in all municipalities, both large and small (though in very small municipalities an explanation based on residential segregation is meaningless), whether the majority of residents are Catalan-speaking or Spanish-speaking, the distribution of pupils is markedly uneven, leading to some schools having only a minority of Catalan-speaking pupils, or none at all. With an even residential distribution, the situation could be very different and more favourable to fostering the normal use of Catalan (Catalan-speaking and bilingual municipalities), or at least more favourable to the pupils' familiarity with Catalan (Spanish-speaking municipalities).

We have also seen how, to a large extent, linguistic and social segregation tend to point in the same direction. This is particularly significant in schools where there is a greater concentration of Catalan-speaking pupils in a non Catalan-speaking location (the pupils coming from families with above average levels of education) and in schools with a high concentration of non Catalan-speaking pupils in Catalan-speaking municipalities (the pupils coming from families with below average educational backgrounds). In general, then, the children of highly educated Catalan-speaking families and those of non Catalan-speaking families with poor educational backgrounds are to be found in the most highly segregated schools, even though they are opposing groups, especially in municipalities where they are not in the linguistic majority. In contrast, the children of educated non Catalan-speaking families and less educated Catalan-speaking families are distributed more evenly, probably because the linguistic and academic indicators do not have such a clear influence on the choice of school, as they do not reinforce each other. There are, then, some situations in which language reinforces social segregation, while there are others in which it attenuates it, but there is a significant link between them in all cases.

This leads us to think that factors leading to a reduction in social segregation will also help to reduce linguistic segregation. Beyond the limits marked by inter-municipal and, to a lesser extent, intra-municipal residential segregation, the local and autonomous education authorities can develop policies to favour greater social (and, as a side effect, linguistic) heterogeneity in schools (Benito and González, 2007). A clear contribution can be made by instruments for planning and regulating the processes by which pupils are assigned to schools, such as policies for reserving places for pupils with special educational needs, the guidelines at Municipal Education Offices, reductions in pupil-teacher ratios, the (re)design of

¹¹ Educational systems which are not comprehensive or are quasi-market led favour segregation in schools. In Catalonia there is only one feature of the model which systematically favours segregation: the fact that there are both public and grant-maintained school networks.

catchment areas to take in large areas which include neighbourhoods with differing sociodemographic characteristics, etc. Logically, to avoid mechanisms leading to segregation, it is indispensable for these policies to be accompanied by the disappearance of the financial barriers to access to grant-maintained schools, another important factor in educational segregation.

At the beginning of this article we pointed out that, when referring to the concept of linguistic segregation, we were not considering intentional processes or differentiated linguistic models in schools, as the Catalan model for language use in schools establishes the same language of instruction for all pupils, avoiding the risk of linguistic fragmentation in the system. The figures presented in the article referring to the distribution of pupils according to the language used by their parents, however, reveal some risk of linguistic fragmentation related to structural processes which go beyond the model of language immersion in schools. These risks stem from the levels of social segregation which exist in the school system. Minimising these risks means tackling the processes of social segmentation which exist in some Catalan municipalities, so as to avoid the development of segregated school environments which can hinder pupils' mastery of Catalan and lead to negative attitudes to the language.

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