Identity, Language Attitudes, and Language Use in Spanish-Catalan Bilingual Adolescents in Catalonia

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ABSTRACT<br>Identity, Language Attitudes, and Language Use in Spanish-Catalan Bilingual Adolescents in Catalonia

## Sadie Cazorla Sitges

The link between language and identity is undeniable: language can both be a salient element of our identity, and a tool to perform and negotiate it. For multilingual speakers, this relationship becomes less straightforward as they have multiple languages (and therefore, identities) available to choose from. Said choice is particularly difficult in conflictual multilingual contexts, where the sociopolitical tensions often make language choice become a political statement. This study focuses on one of such contexts, Catalonia, with the aim to explore the language identities, attitudes and daily use of the adolescents that grew up with the sociopolitical turmoil of Catalonia's independence attempt of 2017.

Participants included 45 high-school students from two schools located in the Barcelona metropolitan area. All participants completed ethnolinguistic questionnaires (capturing the role of language in identity, as well as their attitudes toward both Catalan and Spanish), and language use and social network surveys (measuring language entropy in different daily settings, as well as network size and intimacy in both languages).

Results revealed the expected pattern regarding the identity-language links, whereby a stronger sense of either ethnic identity was associated with greater support for that language in various social contexts. However, the strongest identity was bilingual, and it appeared to co-exist with Spanish and Catalan ethnic beliefs. Findings suggest the existence of a complex multifaceted multilingual identity in which languages are not in competition with each other.

Keywords: language attitudes, social network analysis, language entropy, bilingual identity, Cataloni

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## Chapter 1. Introduction

As much as we like to think of our identities as something that belongs to us, they are actually constructed through our interaction with the world and the people that surround us (Blackledge \& Pavlenko, 2001; Bucholtz \& Hall, 2005; Edwards, 2009; Giles et al., 1977; Lo, 1999). We present ourselves a certain way based on our beliefs about the world, trying to adhere to social labels which we feel most favorably about. For instance, if we care deeply about the environment, we often adopt various practices and behaviors that reflect our attitudes (such as recycling or buying second-hand items). Garrett (2010) defines attitudes as psychological constructs that predispose an individual to react favorably or unfavorably to a given object. Just like identities, attitudes are created and perpetuated through interaction (Hogg \& Smith, 2007; Garrett, 2010) and can be governed by people's sense of membership to a given social group (Hogg \& Smith, 2007). Attitudes cannot be understood as isolated phenomena; rather, they are linked to the social context in which they occur, as they can be both the cause and the consequence of a given situation (Blackledge \& Pavlenko, 2001). A clear example of the reciprocal relationship between attitudes and various contexts in which they are evoked are racial tensions in the United States, which are both instigated and perpetuated through harmful negative attitudes toward people from minoritized or underrepresented ethnic backgrounds. In a similar way, attitudes reflect how people negotiate their identities, and these identities often impact language practices, among other social behaviors (Blackledge \& Pavlenko, 2001; Garrett, 2010; Hogg \& Smith, 2007). Put simply, how we behave and talk reflects our attitudes about the world.

Language is an important part of our identities, as we use it to perform and negotiate them. In addition, language can also be a salient attribute that marks our membership in a particular social group (Tajfel \& Turner, 1986). For bilingual and multilingual speakers, this aspect of their identities is not always as straightforward as for those who speak only one language. Having more than one language available entails the possibility of being considered a member of different social groups; hence, choosing to use one language over another, or to use multiple languages in a given interaction, may signal a person's solidarity to a particular group and/or refusal to be associated with another. For instance, Bourhis and Giles (1977) showed that Welsh learners who self-identified as "Welsh" spoke with a more salient Welsh accent when communicating in English as a way to emphasize their group membership and to distinguish themselves from their interlocutor, who belonged to another linguistic group (British). Such language-mediated negotiation of one's identity becomes even more complex in sociopolitical contexts where different ethnolinguistic groups do not always coexist amicably-which may magnify both intergroup differences and in-group identification (Tajfel \& Turner, 1986). Although extensive research has focused on various aspects of bilingual and multilingual identity (particularly, in migrant settings), conflictual settings have been comparatively less investigated. More research is needed to understand how bilingual and multilingual identity is defined and negotiated in this type of context. This study therefore focuses on Catalonia, one of such conflictual contexts, with the aim to examine the interplay between identity, language attitudes, and language use in bilingual (Spanish and Catalan) adolescents.

## Chapter 2. Background Literature

## Language and Identity

Language and identity are closely intertwined. However, while traditional views see language as a tool to perform pre-existing identities (Giles et al., 1977; Labov, 1963), such as when speakers exaggerate regional phonetic variation to indicate their place of origin (e.g., Martha Vineyard's speakers centralizing their diphthongs in Labov, 1963), modern approaches view identity as the product of linguistic practices (Blackledge \& Pavlenko, 2001; Bucholtz \& Hall, 2005), where, for instance, Indian hijras (male-born transgender persons) use language to perform their femininity, using feminine gender marking when referring to themselves (Hall, 1997). According to Hogg and Smith (2007), people make sense of their social context by categorizing themselves and others as members of various social groups from which they derive their identity. Thus, for a given individual, their multiple identities represent various groups (or social categories) that they perceive themselves to belong to (Tafjel \& Turner, 1986). Identities are constructed, challenged, and negotiated in interaction, when individuals come in contact with one another, as members of the same or different social groups. For example, during conversation, individual language practices such as language or register choice highlight various social categories that the person identifies (or wishes to be identified) with, including gender (Edwards, 2009), ethnicity (Giles et al., 1977), and class (Codó \& Patiño-Santos, 2014). This self-representation can be either accepted or rejected by their interlocutors (Blackledge \& Pavlenko, 2001; Giles et al., 1977). For instance, Lo (1999) described how a Korean American, by choosing to respond in English to his interlocutor-a Chinese American who addressed him in Korean-was refusing to validate this person as a competent Korean speaker and member of the Korean community. An individual's identity is then not solely the product of their own language practices; rather, a person's identity importantly also reflects various language practices of their interlocutors (Blackledge \& Pavlenko, 2001; Lambert, 1967; Lo, 1999).

## Bilingual/Multilingual Identity

Social groups are not, however, necessarily fixed and mutually exclusive categories. For bilingual and multilingual individuals, membership to two or more groups can exist simultaneously, which necessarily entails fluid, multiple identities (Blackledge \& Pavlenko, 2001). As such, bilinguals and multilinguals must manage different cultural environments and negotiate multiple identities with language practices such as code-switching, code-mixing, and language choice (Blackledge \& Pavlenko, 2001; Lo, 1999). For instance, Besnier (2004) describes how Tonga speakers in New Zealand code-switch between their ethnic language and English (an international prestige language) during commercial transactions to project themselves as "modern and cosmopolitan" (p. 30). In another example of multilingual identity practices, Rajadurai (2007) shows that speakers in Malaysia sometimes use out-group phonological features during an interaction with a speaker from a different language background as a way to affiliate with them and generate solidarity in conversation.

According to Hogg and Smith (2007), people's multiple identities are compartmentalized and exist separately from one another. This way, identities that are contradictory (e.g., being an environmentalist while also being a traveler) can keep co-existing without disrupting one's sense of an integrated self. There is some evidence in sociolinguistics that bilingual and multilingual speakers present themselves differently depending on the language they are using, allegedly due to the culture-specific values each language elicits. For instance, Ramírez-Esparza et al. (2006) found that Hispanic American English-Spanish balanced bilinguals presented themselves as more extroverted and agreeable
in English than in Spanish. According to the authors, these behaviors reflected the American cultural values of assertiveness, friendliness, and achievement, which are positive qualities for the promotion of the independent, individual self. Thus, these bilinguals defined their identity by presumably associating these values with English. Marian and Kaushanskaya (2004) showed similar results with Russian-English bilinguals, who exhibited a more collectivist mindset when speaking Russian than English. These results were interpreted as being due to bilinguals associating Russian with Russian values, which are collectivist or group-oriented, and associating English with American values, which promote individualism.

However, in multilingual contexts-where intergroup contact is likely to occur-bilingual and multilingual speakers may have two opposing identities triggered simultaneously, and they may have to reconcile them to keep an integrated self-image (Hogg \& Smith, 2007). Because speech can serve as a symbol of ethnic identity and cultural solidarity (Giles et al., 1977), language choice and language practices in these contact situations will show support and loyalty to one group or another. For instance, Lambert (1967) describes an incident in which a Montréal francophone who was interacting in Québécois French with a friend avoided engaging a third friend in the conversation, with whom she usually spoke European French. By excluding this friend from the conversation, the speaker had seemingly chosen one of their two identities, thus displaying more solidarity with one of her friends than with the other.

## Bilingual Language Practices in Non-Conflictual Contexts

Recent approaches to social identity argue that being bilingual does not necessarily imply juggling opposing, separate identities; rather, bilingualism entails a third, hybrid identity that balances both languages (Chen et al., 2008; Rajadurai, 2007; Trofimovich \& Turuševa, 2015). Nguyen (2021) found that, for ethnic minority college students in Vietnam, learning standard Vietnamese was perceived as useful for integrating and thriving socioeconomically, because this language variety is a lingua franca used in public life and education. On the other hand, these speakers' ethnic languages (e.g., Rengao, Bahnar, and Jarai) were still seen as equally important because these languages, typically used among family members, were associated with traditional values and cultural practices. These students had developed identities that oscillated between the preservation of their home variety and the construction of a mainstream identity, which was performed through standard Vietnamese. Rosendal (2017) found similar results with Ngoni speakers in Tanzania, although there were some generational differences. While older individuals displayed a strong sense of ethnic identity and valued more the symbolic aspect of language, preferring Ngoni to Swahili, the younger generation expressed a global perspective and was more favorable to Swahili due to its communicative value. Although older speakers in fact used many Swahili words and expressions while speaking Ngoni, they seemed largely unaware of these code-mixing practices and perceived themselves as unilingual speakers of Ngoni, which probably reflected their strong sense of cultural identity and the belief that their language defines their ethnicity (Rosendal, 2017). In contrast, the younger generation was conscious of their language practices and purposely developed a hybrid Ngoni-Tanzanian identity, which was negotiated and performed through both languages, where Ngoni indexed their local identity and Swahili characterized a mainstream Tanzanian identity. Similarly, Lanza and Svendsen (2007) observed that, for the Filipino diaspora in Norway, language was not considered a core aspect of their identity, which was reflected in their pragmatic views of language acquisition and use. Norwegian was appreciated for its practical value and regarded as a tool to integration and success, while Tagalog (their ethnic language) was maintained to communicate within the family circle.

This creation of hybrid identities has also been observed in multilingual individuals living in migrant settings. Creese and Blackledge (2011) investigated language practices of students in four different heritage language schools in England. While these schools promoted a policy of teaching English and other ethnic languages as separate, non-overlapping subjects, students developed complex linguistic repertoires in which their languages and identities were not compartmentalized but conceived as a whole. They practiced flexible bilingualism in which all their languages were given equal value, and their identity was defined by a mixture of two (or more) languages and cultures. In another migrant context, Dailey-O'Cain and Liebscher (2011) described how first- and second-generation German immigrants in Canada constructed their German identity and defined their community through their language practices. These speakers preferred standard German to their ethnic varieties for both its communicative and symbolic value, because ethnic varieties were considered inadequate at connecting people in the way that the standard variety did. There was therefore a gradual loss of these speakers' regional, ethnic language varieties, in favor of the standard variety used as a common language for immigrants to create a German identity and a community of practice in Canada.

In other cases, minority language speakers may reject their first or ethnic language due to its low prestige, thus adhering to a largely monolingual use of the dominant language. Taqavi and Rezaei (2019) observed that, for Azerbaijani Turkish-Farsi bilinguals in Iran, language preferences seemed to stem directly from the fact that Farsi was the language of education and had more status and social prestige than Turkish, which was associated with uneducated, lower-class individuals (a stereotype perpetuated by the media). In this context, women tended to reject their ethnic language, claiming membership in the mainstream group (which they viewed as more educated and refined) through the almost exclusive use of Farsi. On the other hand, men preferred Turkish when interacting with other men, because they considered it a more intimate language. Vincze et al. (2021) found similar results with Hungarian speakers in Slovakia, where negative perceptions of their ingroup members and their language motivated these speakers to abandon their ethnic community and to claim membership in the majority group.

## Bilingual Language Practices in Conflictual Contexts

When political conflict is added to the cultural, social, and linguistic tensions existing in a majority-minority language contact situation, it becomes harder for bilinguals and multilinguals to navigate their identities because language choice becomes a political statement, with consequences for language learning and use. Prior research, in fact, seems to support the hypothesis that, in a politically tense sociolinguistic context, the link between language and ethnic identity is strengthened and it defines speakers' language practices. For instance, Gatbonton and Trofimovich (2008) found that, for French-English bilingual francophones in Québec, strong beliefs about the role of language in defining their identity and support for their group's political aspirations were associated with less frequent use of English and, therefore, with lower proficiency in this language. In another politically tense context, Arabic speakers in Israel (a Hebrew-dominant environment) who valued Hebrew as a tool for social inclusion, avoided using it extensively as it was perceived as a threat to their ethnic identity (Dubiner, 2018). Olsen and Olsen (2010) found similar results with Palestinian students in East Jerusalem. Their participants seemed unable to separate identity from sociopolitical tensions: they showed greater identification with Arabic (their ethnic language), regarding it as more beautiful and more suitable for intimate relationships, and they expressed negative perceptions about Hebrew, extending this negativity to Hebrew-speaking members in their community. Although these prior studies seem to indicate that language attitudes and practices interact differently in conflictual and non-conflictual
settings, relatively little research is conducted in conflictual sociolinguistic contexts, implying that more work is needed to understand how bilingual and multilingual speakers' identity intersects with their linguistic practices.

## Consequences of Bilingual/Multilingual Language Use

When majority and minority languages co-exist, there is always a threat that a language shift might occur in favor of the majority language (Bourhis et al., 2007). The survival of a minority language community as a distinct group will depend on many factors, both institutional and individual. For instance, if the minority language is taught at schools, recognized institutionally through legislation, and if it keeps being used and transmitted from one generation to the next, a minority language community will be less likely to disappear into the majority language one (Ehala, 2015). According to Bourhis et al. (2007), the perception that a language community has of itself (i.e., perceived ethnolinguistic vitality) can also determine the outcome in a language contact situation. In the case of minority language communities, positive attitudes toward one's ethnolinguistic group have been linked to the maintenance of a minority language (Giles \& Johnson, 1987). On the other hand, when speakers of a minority language perceive their mother tongue as having low social value, such as when they believe that it lacks institutional representation or it is not widely spoken, they will tend to accommodate to dominant-language speakers, which can eventually lead to language shift (Ehala, 2015). A clear example of such a shift is the status of minority languages in the United States, where these languages tend to disappear after two generations, because descendants of immigrants prefer English and gradually abandon the use of their heritage languages (Potowski, 2013).

However, on occasion, a language shift toward the dominant language in a given community has been reversed successfully. For example, Catalan, Irish, and Basque have been revitalized by the addition of new speakers from a majority group, who have undergone an individual language shift in favor of these languages (Puigdevall et al., 2018; Pujolar \& Gonzàlez, 2013; Pujolar \& Puigdevall, 2015; Woolard, 2011). This process has often been motivated by these speakers joining a new community of practice, such as starting a university degree or getting married, where a minority language gains social and communicative value for these speakers (Pujolar \& Gonzàlez, 2013; Pujolar \& Puigdevall, 2015). Another motivation for speakers to embrace an individual language shift has been to improve their socioeconomic standing (Puigdevall et al., 2018). Nevertheless, all language shift reversals discussed here had been preceded by the implementation of various measures at the institutional level aimed to help the recovery of these minority and (at the time) endangered languages.

## Language Attitudes and Use in Catalonia

Catalonia is a particularly interesting context for researching bilingual and multilingual identities and language use in a majority-minority language contact situation. Catalan, the region's co-official minority language, has been historically minoritized, at both the institutional and the demographic level (Soler, 2013). As a rich industrialized area, Catalonia fostered national migration from other less-developed areas of Spain throughout the $19^{\text {th }}$ and $20^{\text {th }}$ centuries (Newman \& Trenchs-Parera, 2015). By 1980, almost half of the population in Catalonia were second language speakers of Catalan (Woolard \& Gahng, 1990). This situation created unusual attitudes toward both languages, where Spanish (dominant nationwide and more widely spoken in the region) had lower prestige than Catalan, because Spanish was associated with belonging to the working class and having less education. During that period, Catalan was considered an "authentic" language (in the sense that it marked a speaker's membership in a particular ethnic group) and was reserved for
interactions between first language speakers; as such, second language speakers of Catalan were stigmatized, and accommodation to Castilian was common (Woolard \& Gahng, 1990). Nowadays, thanks to the successful language policies implemented throughout the 1980s by Catalonia's autonomous government, a language shift toward Spanish has been reversed. Catalan has regained institutional recognition and presence in the public sphere (Newman \& Trenchs-Parera, 2015; Soler, 2013). However, although the majority of Catalonia's residents understand ( $95 \%$ ) and speak ( $73 \%$ ) Catalan (IDESCAT, 2011), there is a significant proportion of the population for whom Spanish is their first (53\%) or dominant (47\%) language, with an additional small group of residents (less than $10 \%$ ) who have grown up speaking both languages and use them daily (IDESCAT, 2018). Thus, although most residents of Catalonia are bilingual (at least in principle), Spanish dominates over Catalan in most contexts.

Previous research on language attitudes and practices in Catalonia has observed a tendency toward linguistic accommodation, bilingualism, and a multilingual identity, particularly in the Barcelona metropolitan area. For instance, Trenchs-Parera and Newman (2009) showed that Catalan-Spanish code-mixing was a way for some speakers to claim membership in both ethnolinguistic communities and display a dual identity. Even though two of their participants personally preferred Catalan to Spanish, they did not wish to impose it and would use Spanish with second language speakers of Catalan, thus favoring inclusion. In the present-day context, Catalan is no longer regarded as a marker of a speaker's ethnolinguistic identity. Rather, it has become an "anonymous" language, that is, a language available to everyone because it does not belong to any specific group (Byrnes, 2020; Pujolar \& Gonzàlez, 2013; Soler, 2013; Woolard \& Gahng, 1990; Woolard, 2009). Thus, how identity is performed through language use in Catalonia is a matter of personal choice, not a reflection of an individual's ethnic group (Pujolar \& González, 2013; Woolard, 2009).

Language practices in Catalonia are not, however, completely unmarked, although they seem to involve not so much a way to claim but to refuse membership in a group (Lapresta-Rey et al., 2019). Woolard (2009), for instance, found that some high-school students adopted a functionally monolingual Spanish practice at school, even though they were proficient in Catalan (the language of education in Catalonia), as a way of expressing an anti-Catalan sociopolitical stance. This practice has also been observed in teenage immigrants (specially Latinos), who reject Catalan as a marker of their ethnic identity (Block \& Corona, 2019; Codó \& Patiño-Santos, 2014; Lapresta-Rey et al., 2016). Similarly, the use of Spanish is not regarded as completely unproblematic by Catalan independence activists (Byrne, 2020). In fact, the so-called Catalan "civic-nationalism," despite presenting itself as an inclusive movement in which Catalan is not an ethnolinguistic marker but a tool for social inclusion (Byrnes, 2020), has been criticized for being, at its roots, an ethnic, elitist, and top-down project (Clua-Fainé, 2011; Miley, 2017). ${ }^{1}$ In the present-day Catalan society, there is still an underlying ethnolinguistic, class-based divide which was most clearly observable through social, linguistic, and cultural tensions during Catalonia's recent independence project (Procés), enhanced by its media coverage (Micó \& Carbonell, 2017). The consequences of this political endeavor that started in 2012 and culminated in the illegal referendum of 2017 are still influencing most aspects of Catalonia's current sociocultural, political, and linguistic reality.

## The Present Study

Although Catalonia is far from being an under-researched sociolinguistic context, most previous studies on language attitudes and use in the region collected their data before

[^0]October 2017 (that is, before the independence referendum took place). Hence, the aim of this study is to provide a post-referendum update focusing on the construction of multilingual identities by adolescents in the final years of secondary education in the Catalan bilingual system. Bilingual and multilingual speakers of this particular age are interesting from the point of view of sociolinguistics because it is the time when adolescents start entering their own communities of practice, where parental linguistic influence decreases in favor of that of peers, and adolescents begin creating and performing their own linguistic identities (Caldas \& Caron-Caldas, 2002). Furthermore, in the case of Catalonia, individuals of this age group have grown up during a particularly tense sociopolitical period, which makes it interesting to document their language identity. According to Tajfel and Turner (1986), conflict can heighten both intergroup differences and in-group identification and, therefore, impact how individuals construct and perform their social identity.

Against this general backdrop, the specific goal of this study is to explore potential consequences of language attitudes for bilingual and multilingual use through an analysis of adolescents' social networks. Although some scholars have used a social network analysis in Catalonia, for example, to explore a school's social network (Woolard, 1997), none has yet, to the best of my knowledge, examined social networks of bilingual and multilingual adolescents in the aftermath of the referendum. Since language practices in Catalonia are mostly context-dependent (Pujolar \& González, 2013; Woolard, 2009), knowing how adolescents' social networks are structured (e.g., in terms of languages involved or the intimacy of interaction) and how their languages are used across various communicative contexts, such as whether languages are integrated or compartmentalized (Gullifer \& Titone, 2020), will help paint a clearer picture of their actual language practices. Thus, this study could clarify the relationship between language attitudes and practices in conflictual settings, which would be relevant to other similar sociopolitical contexts, such as Québec (Gatbonton \& Trofimovich, 2008) and Israel (Dubiner, 2018). This study addresses the following research questions:

1. What language beliefs (in reference to identity and ethnolinguistic vitality) and attitudes do Barcelona's high-school students have toward Catalan and Spanish?
2. Are these beliefs and attitudes correlated with when and how these students choose to use each language, as revealed through their social networks?

## Chapter 3. Method

## Participants

Participants were high-school students $(N=45)$, all between 14 and 16 years of age, from two different schools in the Barcelona metropolitan area. The first school is located in an upper middle-class neighborhood, and its language of instruction is Catalan. The school hosts a small percentage of immigrant students from various locations (e.g., Europe, South America, India), and most students have lived in Spain for several years and are proficient in both Catalan and Spanish. According to a local teacher's report, at the time of data collection, there were only $2-3$ students who did not yet speak fluent Catalan. Of the 17 participants from this school, 15 students indicated Catalan as their home language, while the remaining three students failed to disclose their home language. Aside from having Spanish as their second language, the students in this school also studied French and English as additional languages at school ( 2 hours per week each). The second school is located in a former industrial city outside Barcelona (a 30 -minute drive from the city center). Even though many students come from working-class Castilian families residing in this area, the school's language of instruction is also Catalan. This school also has a small percentage of immigrant students, most of whom are of Moroccan origin. Most of the participants from this school (21 out of 28) listed Spanish as their home language, while the remaining participants indicated Catalan (4) or both (3). This school also offered its students French and English courses (2 hours per week each).

As shown in Table 1, there was a clear contrast between both schools regarding the students' ethnic self-identification, in response to the questions asking them to indicate (using a 9 -point scale) the degree to which such labels as "only Catalan," "only Spanish," and "equally Catalan and Spanish" describe how they feel about their ethnic belonging. The students expressed a stronger Catalan ethnic identity in School 1, with an average mean of $7.20(S D=2.04)$, than in School 2, with an average mean of $3.38(S D=2.64)$. Conversely, the students' Spanish identity was weaker in School 1, with an average mean of 3.20 ( $S D=$ 2.62 ), than in School 2, with an average mean of $7.31(S D=2.43)$. Nevertheless, the students in both schools felt similarly about their bilingual identity, with an average mean of 4.53 ( $S D$ $=3.07)$ in School 1, and an average mean of $5.58(S D=2.82)$ in School 2. Although the demographic and ethnic self-identification differences between School 1 and School 2 are nontrivial, the sample size was too small to consider these two groups separately, so all participants' data were analyzed as part of the total sample of 45 students.

Table 1.
Participants Self-Reported Ethnic Identity

| Ethnic Identity | School 1 |  | School 2 |  |
| :--- | :---: | :---: | :---: | :---: |
|  | $M$ | $S D$ | $M$ | $S D$ |
| Only Catalan | 7.20 | 2.04 | 3.38 | 2.64 |
| Only Spanish | 3.20 | 2.62 | 7.31 | 2.43 |
| Equally both | 4.53 | 3.07 | 5.58 | 2.82 |

## Materials

The data were collected via a paper-based questionnaire consisting of five sections, each focusing on a different set of variables. The first section targeted participants'
demographic information (see Appendix A). Adapted from Gatbonton and Trofimovich (2008), the eight questions included in this section focused on participants' background such as their age, self-reported gender, first (home) language(s), and other languages they know or study. The second section targeted participants' ethnic self-identification (see Appendix B). Using a 9 -point scale $(1=$ not at all and $9=$ perfectly $)$, they indicated how well they thought specific labels described them. The labels included in this section were adapted from Gatbonton and Trofimovich (2008) to reflect those relevant to Catalonia's multilingual context: "only Catalan," "only Spanish," "equally Catalan and Spanish," and "other" (where participants were required to specify which ethnolinguistic group they considered as "other").

The third section of the questionnaire elicited participants' language attitudes toward both Spanish and Catalan (see Appendix C). Participants were presented with 37 statements and asked to indicate the degree of their agreement with each on a 9-point scale ( $1=$ totally disagree and $9=$ totally agree). The statements were adapted from Gatbonton and Trofimovich (2008) by changing the languages involved (Catalan and Spanish in Catalonia instead of French and English in Québec), and by adjusting the descriptive context for some statements (e.g., school instead of the workplace) to make them relevant to the study's sociolinguistic context and participant sample. Thematically, this section was divided into four parts. The first part, which comprised Statements 1 through 12, focused on participants' pride for an ethnic group (e.g., "I am proud to let people know that I am Catalan"), with each statement presented twice, once for Catalan and once for Spanish. The second part, composed of Statements 13 through 15, targeted the role that language plays in participants' identity (e.g., "I feel more like myself when I speak Spanish than when I use any other language"). The third part targeted participants' beliefs about the roles of Catalan and Spanish in Catalonia. Statements 16 through 19 addressed whether participants' perceived the majority language as a threat to the minority language (e.g., "If we do not speak Catalan, in a few generations it will be replaced by Spanish"); Statement 19, which did not exist in the original questionnaire, was added to account for the monolingual belief that one nation has only one language ("We live in Spain and, therefore, we must speak Spanish"). Statements 20 to 27 addressed how participants perceived the use of Catalan and Spanish in Catalonia (e.g., "Only Catalan should be used in all spheres of public life in Catalonia"; "I should be able to use Spanish in school whenever I want to without being penalized"). The final part in this section, which comprised Statements 28 through 37, targeted participants' attitudes and personal relations with members of outgroups (e.g., "It is important for immigrant teenagers in Catalonia to speak Catalan, so they can integrate better in the host society"; "I don't mind speaking Catalan if I see that the other person prefers so").

The fourth section of the questionnaire targeted participants' language entropy in different daily settings (see Appendix D). Language entropy refers to the degree of variability in multilingual language use, making a distinction between compartmentalized (low entropy) and integrated (high entropy) multilingual communicative contexts (Gullifer \& Titone, 2020). In compartmentalized contexts, one language predominates over other languages, while in integrated contexts, all languages are engaged relatively equally, and language use is more variable and unpredictable. This measure was adapted from Gullifer and Titone (2020), with the aim to capture the diversity (and the resulting unpredictability) of participants' daily language use in different contexts, namely, at home, at school, and with friends, and in two modalities, namely, in listening and speaking. Participants used a 9 -point scale ( $1=$ never and $9=$ all the time) to indicate the amount of time they speak Catalan, Spanish, and up to three other languages in each of these contexts. They also estimated the percentage of time that they listened to or spoke Catalan, Spanish, and up to three other languages on a daily basis.

The fifth and final section of the questionnaire, adapted from Doucerain et al. (2015), targeted participants' language use and social networks (see Appendix E). Participants were
asked to provide information about the people with whom they interact most often, with space for up to 20 people. They were asked to indicate both the first language(s) of those people, as well as the language(s) in which they communicate with them. It was important to ask both these questions, as participants' first language(s) may not have corresponded to their language of daily communication (Pujolar \& Gonzàlez, 2013). Given that participants are bilingual and likely interact with other bilingual individuals, instead of asking them to select a discrete label (e.g., "Catalan," "Spanish," "both"), as in the original questionnaire, 5-point scales were provided to help account for fully monolingual and code-mixing practices. The option to select "other" and to provide specific first language(s) and/or language(s) of communication was included because some participants may use languages other than Spanish and Catalan in their social networks. Participants were also asked to indicate the nature of the relationships with each person they listed (e.g., friend, classmate, family member), as well as their level of intimacy, captured on a 5 -point scale ( $1=$ not intimate, $5=$ very intimate). Additionally, they were asked to indicate whether each person in their network knows each other by drawing a line between each pair of people.

## Procedure

The researcher (who is a professional English to Spanish/Catalan translator) first translated the questionnaire from English into Catalan and Spanish. After receiving ethics clearance for this study (Certificate 30018149 from Concordia University), the researcher established contact with collaborating teachers in both schools to familiarize them with recruitment and data collection procedures. The study was presented to potential participants during class time, when study goals and conditions of participation were explained and all participants (who were minors) were handed an informative pamphlet and a consent form, both to be reviewed and signed by their parents or guardians. All potential participants also received an envelope in which they could return their consent form (signed or unsigned) anonymously by leaving it at the school's reception desk for the researcher. There were a total of 135 consent forms distributed to students across the two schools. Data collection took place approximately one week after consent forms were returned. During tutorial hours, all students in the collaborating teachers' classrooms (approximately 120 students in total across the two schools) were handed a closed booklet containing a minor's assent form, which was for them to sign, the study's questionnaires, and an extra activity for those who did not wish to take part in the study. These participants who decided to proceed with the study completed the questionnaire in the classroom, whereas those who chose not to sign the assent form completed the extra learning task (an English reading comprehension activity). Both the researcher and the students' teacher were present during data collection, which took approximately 1 hour; however, to ensure that participation remained anonymous, all booklets had blank front and back covers, so neither the teacher nor the researcher would know who was or was not participating in the study when the researcher collected the booklets at the end of the class time from all students. At the end of the school day, the researcher received the entire set of sealed envelopes from each school's front desk so that she could then match the signed consent forms (in the envelopes) from the students' parents or guardians with the signed assent forms (in the completed booklets) from those same students. In total, there were 45 students across both schools whose signed parental consent forms could be matched with those students' signed assent forms.

## Data Analysis

## Language Beliefs and Attitudes

The statements from the language attitudes questionnaire were checked for internal consistency (Cronbach's alpha), separately within each category, to derive composite
measures by averaging across individual scale items demonstrating the highest internal consistency. Participants' ethnic identity was defined through two parallel measures, one for Catalan ( $\alpha=.93$ ) and one for Spanish $(\alpha=.91)$, computed as a mean across seven items capturing participants' sense of pride in each ethnic group and its national symbols and language (see Table 2). Participants' bilingual identity was a mean score across three items focusing on the importance they ascribed to being able to speak two languages ( $\alpha=.80$ ). Comfort using Catalan was a mean score across three items examining participants' feelings regarding the use of Catalan as a language of socialization, although the internal consistency value was low ( $\alpha=.66$ ). Catalan as an ethnolinguistic marker was a mean score across three items examining beliefs which link language and identity ( $\alpha=.73$ ). Participants' views on the role of either language in instructional settings were examined through two parallel measures capturing their SUPPORT FOR CATALAN $(\alpha=.68)$ and SUPPORT FOR SPANISH $(\alpha=.61)$ IN education, each expressed as a mean score across four and three items, respectively. However, internal consistency of these measures was again relatively low. Support for Catalan as the main language in Catalonia was a mean score across two items focusing on participants' beliefs regarding the role of Catalan in Catalonia ( $\alpha=.87$ ). Finally, participants’ responses to five separate key items were retained as individual scores to capture (a) participants' willingness to preserve the Catalan language and culture, (b) perceived vitality of the Catalan language, (c) support for Catalonia's independence, (d) support for Spanish as the main national language, and (e) perceived acceptance when speaking Catalan.

Table 2.
Summary of Language Beliefs and Attitudes Measures
Measure $\quad$ Scale items

Catalan identity

Spanish identity

1. I am proud to be Catalan.
2. I am proud to let people know that I am Catalan.
3. I am proud of the achievements of the Catalan nation.
4. I feel proud to see the Catalan flag displayed around me.
5. I feel proud to hear and/or sing the Catalan hymn.
6. I am proud to be able to speak Catalan.
7. Speaking Catalan is important for my personal identity.
8. I am proud to be Spanish.
9. I am proud to let people know that I am Spanish.
10. I am proud of the achievements of the Spanish nation.
11. I feel proud to see the Spanish flag displayed around me.
12. I am proud to be able to speak Spanish.
13. I feel proud when I hear the Spanish hymn played around me.
14. I feel more like myself when I speak Spanish than when I use any other language.

Bilingual identity

Comfort using Catalan

Catalan as an ethnolinguistic marker

1. Being able to speak Spanish and Catalan fluently is part of who I am.
2. Growing up in a bilingual community has prepared me better to live in today's multicultural world.
3. I am proud of being able to speak Catalan and Spanish because it allows me to communicate with more people than if I only spoke one.
4. I do not feel comfortable amongst a group of people that only speak Spanish.
5. I tend to get along easier with Catalan speakers than with Spanish speakers.
6. I don't mind speaking in Catalan if I see that the other person prefers so.
7. One must speak Catalan often to be considered Catalan.
8. When I speak too much Spanish, I feel like I am betraying my roots.
9. A person who does not speak Catalan as their principal language has no right to consider themselves to be Catalan.

Support for Catalan in education

Support for Spanish in education

1. All children should be educated in Catalonia in Catalan only.
2. Catalan should not be imposed on immigrant students, as learning Spanish is enough.
3. It is important for immigrant teenagers in Catalonia to speak Catalan, so they can integrate better in the host society.
4. Immigrants benefit a lot from being in Catalonia, so they should be loyal to Catalonia and learn Catalan.
5. I should be able to use Spanish in school whenever I want to without being penalized.
6. We should have the option to be educated in Spanish in Catalonia.
7. Catalonia's school system does not recognize nor value Spanish language and culture.

Support for Catalan as the main language in Catalonia

1. Only Catalan should be used in all spheres of public life in Catalonia.
2. I only speak in Catalan; we are in Catalonia and everyone should be able to understand me.

Willingness to preserve the Catalan language and culture

Perceived vitality of the Catalan language

Support for Catalonia's independence

Support for Spanish as the main national language

Perceived acceptance when speaking Catalan

1. The Catalan language and culture of Catalonia have to be preserved at all costs.
2. If we do not speak Catalan, in a few generations it will be substituted with Spanish.
3. Catalonia will never realize its potential for as long as it remains a part of Spain.
4. We live in Spain and, therefore, we must speak Spanish.
5. Sometimes, I feel rejected by my peers when I speak in Catalan.

Note. Items that were reverse-scored are bolded.

## Language Entropy

Following Gullifer and Titone (2020), Shannon entropy (H) was calculated for each participant, separately for five contexts of language use (at home, at school, with friends, in listening, and in speaking). The entropy measure was computed using the following formula, where $n$ stands for the total number of languages used by a participant in a given context (e.g., Spanish, Catalan, and Arabic used to communicate with friends) and $P_{i}$ corresponds to the proportion that each language is used within the context:

$$
H=-\sum_{i=1}^{n} P_{i} \log _{2}\left(P_{i}\right)
$$

The entropy measure thus captures the sum of log-based probabilities of each language use in a given context (multiplied by -1 to derive a positive entropy value). The minimum value in each context is 0 , corresponding to a situation where only a single language is used in a specific context (i.e., illustrating little "uncertainty" or low entropy in language use). The maximum value per context is determined by the total number of languages possible in a context. For instance, where three languages are used interchangeably (in a high entropy, integrated language context), the maximum $\log n$ value is 1.59 . Gullifer and Titone's (2020) procedure was used to derive the proportion of each language use per context. Language use at home, at school, and with friends, which was self-reported by participants on a 9-point scale ( $1=$ never and $9=$ all the time ), was converted to proportions by dividing the score for each language by the sum total of the scores across all languages used. Language use in listening and in speaking, which was reported by participants on a 100 -point scale $(0 \%=$ never and $100 \%$ = all the time), was similarly converted to proportions, by dividing the use of each language by the sum total of all language use. In sum, the derived five entropy measures indicated the extent to which various languages were highly compartmentalized (low
entropy) or highly integrated (high entropy) in each participant's language use in a given context.

## Social Network and Language Use

Following Doucerain et al. (2015), two types of measures were derived from the social network questionnaire: (a) network size (number of social connections mentioned by each participant) and (b) network intimacy (average intimacy rating across all connections listed by each participant). To capture the language of communication in a participant's social network, these two measures were computed separately for communication only in Catalan, only in Spanish, and in both languages (bilingual interaction), based on each participant's self-reported language of communication with each of the listed connections.

Measures of network inclusiveness (number of non-isolated connections divided by the total number of connections reported by each participant) and network density (number of existing links among listed connections divided by the number of possible links), as described in Doucerain et al. (2015), were excluded from the analysis, because it was not possible to find a way to calculate them so they would be informative. Calculating the density and inclusiveness of each participant's total social network would have overlooked the role that each language had in it. On the other hand, calculating either of these measures for each sub-network, separately for each language listed, could not be done in a straightforward manner, since most networks were bilingual but with a clear preference for one language over the other; in other words, neither the "monolingual" nor the "bilingual" label could fully capture the nature of these networks.

## Statistical Analyses

To address both research questions, which focused on participants' beliefs and attitudes toward both Catalan and Spanish and on the associations of these attitudes with the participants' language use, Spearman correlations (two-tailed) were carried out between different sets of measures. Correlation strength was assessed using field-specific guidelines (Plonsky \& Oswald, 2014), where correlation coefficients around .25 are considered weak, coefficients around .40 are medium in strength, and coefficients exceeding . 60 indicate strong relationships.

## Chapter 4. Results

## High-School Students' Language Beliefs and Attitudes Toward Catalan and Spanish

The first research question targeted the relationship between participants' language beliefs (regarding identity and ethnolinguistic vitality) and their attitudes toward Catalan and Spanish. The key variables in this analysis were the composite categories described in the previous section, derived from the language attitudes questionnaire. As summarized descriptively in Table 3, both Catalan and Spanish ethnic identity values were similarly strong across all participants; however, on average, they felt stronger about their bilingual identity, which was the measure that approached the top of the scale. Participants' support for either language in education was also similar. However, whereas the ratings reflecting a competing view of bilingualism (such as participants' support for either language as the main national language) were low, the ratings favoring a balanced view of bilingualism (such as the need to preserve Catalan, the minority language, in the region) were fairly high.

Table 3.
Summary of Participants' Language Beliefs and Attitudes Measures

| Variable | $M$ | $S D$ | $95 \%$ CI |
| :--- | :---: | :---: | :---: |
| Catalan identity | 5.66 | 2.22 | $[4.91,6.34]$ |
| Spanish identity | 5.12 | 2.40 | $[4.44,5.78]$ |
| Bilingual identity | 7.67 | 1.71 | $[7.06,5.78]$ |
| Comfort using Catalan | 4.52 | 1.65 | $[4.05,5.02]$ |
| Catalan as an ethnolinguistic marker | 2.39 | 1.73 | $[1.90,2.86]$ |
| Support for Catalan in education | 4.45 | 1.85 | $[3.90,5.03]$ |
| Support for Spanish in education | 4.98 | 1.97 | $[4.47,5.50]$ |
| Support for Catalan as main language in <br> Catalonia | 2.44 | 2.00 | $[1.94,3.01]$ |
| Willingness to preserve Catalan language \& | 6.98 | 2.26 | $[6.30,7.59]$ |
| culture | 6.89 | 2.54 | $[6.07,7.61]$ |
| Perceived vitality of the Catalan language | 3.89 | 2.53 | $[3.14,4.65]$ |
| Support for Catalonia's independence | 2.61 | 2.26 | $[2.05,3.25]$ |
| Support for Spanish as main national language | 1.70 | 1.49 | $[1.34,2.14]$ |
| Perceived acceptance when speaking Catalan |  |  |  |

As mentioned previously, there were important differences between School 1 and School 2 in terms of participants' ethnic self-identification. Although the present sample did not allow for separate analysis by school, it is nevertheless worth examining how these differences were expressed in terms of participants' Catalan, Spanish, and bilingual ethnic identity, as well as their sense of pride in their languages. Consistent with their ethnic
self-identification (see Table 1), as summarized in Table 4, School 1 participants expressed stronger Spanish than Catalan ethnic identity, while School 2 participants expressed stronger Catalan than Spanish ethnic identity. As in the entire sample, however, both School 1 and School 2 participants' strongest identity was bilingual. Moreover, even though their preferred ethnolinguistic identity differed by school, participants in both schools generally felt proud to speak both Catalan and Spanish, suggesting that participants' sense of pride in being able to speak either language was largely independent from their preferred ethnic self-identification label and their expressed ethnolinguistic identity.

Table 4.
Summary of Participants' Ethnic Identity and Sense of Pride in Speaking Catalan and Spanish

| Variable | School 1 |  | School 2 |  |
| :--- | :---: | :---: | :---: | :---: |
|  | $M$ | $S D$ | $M$ | $S D$ |
| Catalan identity* | 4.91 | 2.45 | 6.20 | 2.00 |
| Spanish identity* | 5.96 | 2.20 | 2.25 | 1.46 |
| Bilingual identity | 7.33 | 2.27 | 7.81 | .96 |
| Pride in being able to speak Catalan | 6.79 | 2.85 | 7.56 | 2.25 |
| Pride in being able to speak Spanish | 8.07 | 1.63 | 6.38 | 2.36 |

Note. The Catalan and Spanish identity measures used here do not include the item "Pride in being able to speak Catalan/Spanish"

To address the first research question, the composite measures of participants' Catalan, Spanish and bilingual ethnic identity were correlated with five derived sociolinguistic dimensions of Catalan and Spanish, as perceived by participants. As shown in Table 5, there were several weak-to-medium associations between measures of participants' Catalan, Spanish and bilingual identity, and their perception of several sociolinguistic dimensions pertaining to the role of Catalan and Spanish. In terms of Spanish identity, there were weak negative correlations with measures capturing participants' support for preserving the Catalan language and culture and for Catalonia's independence, and a positive correlation (which approached the benchmark for a moderate relationship) with their support for Spanish as the main national language. In essence, the stronger participants felt about Spanish as the language defining their personal identity, the more they supported the use of Spanish as the main national language and the less support they expressed toward the Catalan language, culture, and Catalan's role in Catalonia's political future. On the other hand, in terms of Catalan identity, there were moderate positive correlations with measures capturing participants' support for preserving the Catalan language and culture, and weak correlations with their perception of Catalan's ethnolinguistic vitality and their support for Catalonia's independence. In all cases, stronger perceptions of Catalan identity were associated with greater support for the Catalan language, culture, and Catalan's role in Catalonia's political future. In short, participants' beliefs about their ethnolinguistic identity were, overall, consistent with their views regarding the role of each language in society. Interestingly, for this participant sample, the three identity measures did not seem to be interrelated, meaning that the ethnolinguistic identities that these measures captured were not necessarily mutually exclusive in the sense that having more of one identity did not subtract or add to another identity.

Table 5.
Correlation Coefficients (Spearman rho) Between Ethnic Identity and Sociolinguistic Dimensions of Catalan and Spanish

| Variable | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 Catalan identity | - |  |  |  |  |  |  |  |  |
| 2 Spanish identity | -.08 | - |  |  |  |  |  |  |  |
| 3 Bilingual identity | .22 | .11 | - |  |  |  |  |  |  |
| 4 Willingness to preserve Catalan | $\mathbf{. 4 0}$ | -.25 | $\mathbf{. 3 3}$ | - |  |  |  |  |  |
| 5 Perceived vitality of Catalan language | $\mathbf{. 3 7}$ | -.17 | .10 | .22 | - |  |  |  |  |
| 6 Support for Catalonia's independence | $\mathbf{. 3 0}$ | .$- \mathbf{3 2}$ | .15 | .18 | $\mathbf{. 3 8}$ | - |  |  |  |
| 7 Support for Spanish as main language | -.06 | $\mathbf{. 3 6}$ | -.10 | -.16 | -.06 | -.03 | - |  |  |
| 8 Perceived acceptance speaking Catalan | .22 | .13 | .23 | .10 | .16 | .12 | .17 | - |  |
| 9 Comfort using Catalan | $\mathbf{. 3 7}$ | .$- \mathbf{4 5}$ | .10 | .20 | .13 | $\mathbf{. 3 2}$ | -.23 | .11 | - |

Note. Associations that exceeded the benchmark for a weak relationship (.25) are bolded (Plonsky \& Oswald, 2014).

The next analysis explored the relationship between participants' ethnic identity and their views of the role of Catalan in Catalonia, namely, Catalan as an ethnolinguistic marker and Catalan as the rightful main language in Catalonia. As shown in Table 6, Catalan identity was positively correlated with support for Catalan as the main national language, with a coefficient approaching the benchmark for a moderate relationship; however, Catalan identity showed no significant relationships with Catalan as an ethnolinguistic marker. In essence, a strong sense of Catalan ethnolinguistic identity was associated with greater support for Catalan as the main language in Catalonia, while it was unrelated to the belief that Catalan is an ethnolinguistic marker. On the other hand, Spanish identity was strongly negatively correlated with Catalan as the main national language, and also showed a weak negative correlation with Catalan as an ethnolinguistic marker. In all cases, stronger perceptions of Spanish identity were associated with views that place Catalan in an unprivileged position. In short, the tendency observed in this analysis mirrors the findings reported above, namely, that participants' sense of ethnolinguistic identity was consistent with their beliefs regarding the role of each language. However, as shown in Table 5, there was a weak positive association involving bilingual identity, namely, with participants' support for the Catalan language and culture, which implies that expressing a bilingual identity did not necessarily entail having Catalan and Spanish compete with each other.

Table 6.
Correlations Between Ethnic Identity and Language as an Ethnic Marker

| Variable | 1 | 2 | 3 | 4 | 5 |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 1. Catalan identity | - |  |  |  |  |  |
| 2. Spanish identity | -.03 | - |  |  |  |  |
| 3. Bilingual identity | .27 | .15 | - |  |  |  |
| 4. Catalan as ethnolinguistic marker | .18 | -.29 | -.17 | - |  |  |
| 5. Catalan as main national language | .37 | -.64 | -.14 | .47 | - |  |

Note. Associations that exceeded the benchmark for a weak relationship (.25) are bolded (Plonsky \& Oswald, 2014).

The final analysis for this research question examined whether participants' Catalan, Spanish and bilingual identity were associated with their support for the use of either language in education. As summarized in Table 7, Catalan identity showed a moderate positive correlation with support for Catalan in education, and a weak negative correlation with support of Spanish in education. In essence, the stronger affiliation participants' felt toward a Catalan identity, the more they favored the use of Catalan over Spanish in instructional settings. On the other hand, there was a moderate positive correlation between Spanish identity and support for Spanish in education, and a weak-to-moderate negative correlation between Spanish identity and support for Catalan in education. Put differently, stronger affiliation toward a Spanish identity was associated with greater support for the use of Spanish over Catalan in instructional settings. These relationships follow the tendency observed in previous analyses, where stronger expressions of ethnolinguistic identity for a given language (either Catalan or Spanish) were linked to greater support for the use of that language in a variety of social contexts. However, each ethnolinguistic identity was only weakly associated with reduced support for the use of the opposite language in education. Whereas strong endorsement for the language that matches one's ethnolinguistic identity is expected, weak rejection of the other language seems to indicate that participants' attitudes about the use of either language in education were not necessarily mutually exclusive. Put simply, supporting the use of one language in education does not necessarily mean an equivalent rejection of the other.

Table 7.
Correlations Between Ethnic Identity and Support for Catalan and Spanish in Education

| Variable | 1 | 2 | 3 | 4 | 5 |
| :--- | :--- | :--- | :--- | :--- | :--- |
| 1. Catalan identity | - |  |  |  |  |
| 2. Spanish identity | -.08 | - |  |  |  |
| 3. Bilingual identity | .22 | .11 | - |  |  |
| 4. Support for Catalan in education | . $\mathbf{4 8}$ | -.35 | .24 | - |  |
| 5. Support for Spanish in education | -.27 | .46 | -.11 | -.27 | - |

Note. Associations that exceeded the benchmark for a weak relationship (.25) are bolded (Plonsky \& Oswald, 2014).

## High-School Students' Language Identity and Their Use of Catalan and Spanish

The second research question asked which relationships, if any, exist between participants' language identity and their daily use of both languages. The key variables in this analysis were measures of participants' social networks, along with composite scores targeting language entropy in various contexts. As summarized in Table 8, participants tended to prefer monolingual over bilingual social networks, with a clear dominance of monolingual Spanish networks overall. However, participants' self-reported intimacy in their communication was similar across all network types. Regarding language entropy, it was higher (i.e., less predictable, compartmentalized) at school than at home or with friends; participants also showed higher language entropy (i.e., less predictability, uniformity) in the languages that they listened to daily than in those that they used in speaking on a daily basis. In short, participants engaged in integrated multilingual use at school and when listening to media but demonstrated a more compartmentalized language use within their intimate circles.

Table 8.
Summary of Participants' Language Network Size and Network Intimacy

| Variable | $M$ | $S D$ | $95 \% \mathrm{CI}$ |
| :--- | :---: | :---: | :---: |
| Catalan network size | .34 | .26 | $[.022, .47]$ |
| Spanish network size | .46 | .23 | $[.34, .57]$ |
| Bilingual network size | .20 | .14 | $[.14, .27]$ |
| Catalan intimacy | 3.60 | 1.43 | $[2.83,4.24]$ |
| Spanish intimacy | 3.70 | .67 | $[3.39,4.02]$ |
| Bilingual intimacy | 3.63 | .88 | $[3.22,4.04]$ |
| Entropy at home | .66 | .51 | $[.52, .81]$ |
| Entropy at school | 1.16 | .47 | $[1.02,1.30]$ |
| Entropy with friends | .63 | .41 | $[.51, .77]$ |
| Entropy speaking | .94 | .44 | $[.81,1.07]$ |
| Entropy hearing | 1.10 | .42 | $[.98,1.21]$ |

To answer the second research question, the above measures of participants' social networks and language entropy in different daily settings were examined in relation to the measures of their ethnic identity, again through correlation analyses. The first analysis (summarized in Table 9) focused on the relationships among various measures of participants' social networks. Catalan network size showed moderate positive correlations with both Catalan and bilingual intimacy. In other words, larger Catalan networks were associated with a greater sense of intimacy when communicating in Catalan, or in a mixture of Catalan and Spanish. On the other hand, Spanish network size only showed one strong negative correlation, which was with Catalan network size, meaning that having a larger social network in one of the two languages was associated with a smaller network in the other
language. Nevertheless, while all three intimacy measures showed moderate-to-strong positive relationships between them, only Catalan and bilingual network size showed weak-to-moderate associations with their respective intimacy measures. In essence, participants tended to have a similar degree of intimacy across their networks, irrespective of their language of communication, and the number of people with whom they communicated in a given language was not relevant to the sense of intimacy that they experienced when speaking that language.

Table 9.
Participants' Social Network Structure

| Variable | 1 | 2 | 3 | 4 | 5 | 6 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 1. Catalan intimacy | - |  |  |  |  |  |
| 2. Spanish intimacy | $\mathbf{. 5 3}$ | - |  |  |  |  |
| 3. Bilingual intimacy | $\mathbf{. 7 6}$ | $\mathbf{. 6 6}$ | - |  |  |  |
| 4. Catalan network size | $\mathbf{. 4 2}$ | .04 | .43 | - |  |  |
| 5. Spanish network size | -.09 | .03 | -.02 | -.75 | - |  |
| 6. Bilingual network size | -.31 | .08 | -.35 | -.50 | .07 | - |

Note. Associations that exceeded the benchmark for a weak relationship (.25) are bolded (Plonsky \& Oswald, 2014).

The next analysis examined which relationships, if any, existed between the participants' identity and their social network structures. As shown in Table 10, there were negative weak correlations between Catalan identity and bilingual network size. In short, stronger affiliation toward Catalan was associated with smaller bilingual networks. Interestingly, Catalan identity did not have a relationship with either Catalan or Spanish network size and intimacy, meaning that affiliation toward a Catalan identity was independent from how large participants' monolingual networks were or how intimate they felt communicating in either language. On the other hand, Spanish identity showed weak-to-moderate negative correlations with Catalan intimacy and Catalan network size, and a moderate positive correlation with Spanish network size. In essence, a strong sense of affiliation toward a Spanish identity was associated with having larger Spanish networks and smaller Catalan networks, and with a lower sense of intimacy when communicating in Catalan. Finally, bilingual identity showed weak-to-moderate positive correlations with all three intimacy measures, and a moderate negative correlation with bilingual network size. In other words, greater support for bilingual identity was associated with increased feeling of intimacy when communicating in either language and when code-mixing the two languages. Interestingly, greater support with bilingual identity was also associated with smaller bilingual networks. To summarize, while participants' Spanish identity was associated with a preference for using Spanish within their social networks, their Catalan identity was not related to their social network structure or their overall sense of intimacy; in contrast, having a strong bilingual identity implied experiencing a greater sense of intimacy when communicating in either language.

Table 10.
Correlations Between Participants' Ethnic Identity and Social Network Structure

| Variable | Catalan identity | Spanish identity | Bilingual identity |
| :--- | :--- | :--- | :--- |
| Catalan intimacy | .08 | .$- \mathbf{2 6}$ | $\mathbf{. 2 7}$ |
| Spanish intimacy | -.17 | .08 | $\mathbf{. 2 9}$ |
| Bilingual intimacy | .14 | -.04 | $\mathbf{. 4 0}$ |
| Catalan network size | .24 | $\mathbf{- . 5 4}$ | .04 |
| Spanish network size | -.01 | $\mathbf{. 5 3}$ | -.01 |
| Bilingual network size | .$- \mathbf{3 1}$ | .14 | .$- \mathbf{4 0}$ |

Note. Associations that exceeded the benchmark for a weak relationship (.25) are bolded (Plonsky \& Oswald, 2014).

The next analysis focusing on social network data examined which associations, if any, existed between participants' Catalan network size and intimacy and their comfort using Catalan. This analysis showed that comfort using Catalan was positively correlated with Catalan network size, with a correlation coefficient consistent with a strong relationship (.60); however, no associations emerged between this measure and Catalan intimacy. Thus, whereas a larger Catalan network was associated with feeling more comfortable in using Catalan as a language of communication, the degree of comfort speaking Catalan was unrelated to the degree of intimacy felt when communicating in this language. Put differently, participants who had more interlocutors with whom they communicated in Catalan felt more comfortable using Catalan irrespective of the sense of intimacy that they experienced during those interactions.

The next analysis focused on whether participants' identity was associated with the degree of language entropy that they experienced in different communicative settings. As shown in Table 11, there was a weak positive correlation between Catalan ethnolinguistic affiliation and entropy in daily listening, meaning that stronger Catalan identity was associated with greater diversity (entropy) in the languages that participants heard on a daily basis. Similarly, a weak positive correlation was found between bilingual identity and entropy at school, meaning that stronger bilingual identity was associated with greater diversity (entropy) in the languages participants used at school. On the other hand, most entropy measures showed weak-to-moderate positive correlations between them. For instance, greater language entropy at home was associated with greater language entropy at school and with friends. In short, while greater entropy in one context tended to be related with greater entropy in another (meaning that there was a consistent preference for multilingual language use across contexts), participants' ethnolinguistic identity was unrelated to the diversity in their daily language use.

Table 11.
Correlations Between Ethnic Identity and Language Entropy and Support for Catalan and Spanish in Education

| Variable | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 1. Catalan identity | - |  |  |  |  |  |  |  |
| 2. Spanish identity | -.03 | - |  |  |  |  |  |  |
| 3. Bilingual identity | $\mathbf{. 2 7}$ | .15 | - |  |  |  |  |  |
| 4. Entropy at home | .22 | .09 | .12 | - |  |  |  |  |
| 5. Entropy at school | .06 | .18 | $\mathbf{. 2 5}$ | $\mathbf{. 3 2}$ | - |  |  |  |
| 6. Entropy with friends | .04 | -.21 | .23 | $\mathbf{. 3 5}$ | .14 | - |  |  |
| 7. Entropy speaking | .04 | .22 | .23 | .23 | $\mathbf{. 5 5}$ | $\mathbf{. 3 2}$ | - |  |
| 8. Entropy hearing | $\mathbf{. 2 5}$ | -.09 | .18 | .23 | $\mathbf{. 4 5}$ | $\mathbf{. 2 7}$ | $\mathbf{. 5 3}$ | - |

Note. Associations that exceeded the benchmark for a weak relationship (.25) are bolded (Plonsky \& Oswald, 2014).

Finally, the last analysis examined which associations, if any, existed between participants' support for Catalan and Spanish in education and the degree of language entropy they experienced in various daily settings. As summarized in Table 12, there were weak positive correlations between support for Catalan in education and language entropy at home and with friends. In other words, integrated bilingual language use at home and school was associated with greater support for the use of Catalan in instructional settings. On the other hand, support for Spanish in education was not associated with entropy in any context, meaning that participants' beliefs regarding the role of Spanish in instructional settings were unrelated to how integrated or compartmentalized their language use was in their daily lives. In this regard, it should be noted that language entropy at school showed no associations with support for either language in education, which seems to indicate that participants' views regarding this matter are unrelated to how languages are used at school but instead are informed by their own language beliefs.

Table 12.
Correlations Between Language Entropy and Support for Catalan and Spanish in Education

| Variable | 1 | 2 | 3 | 4 | 5 |
| :--- | :--- | :--- | :--- | :--- | :--- |
| 1. Entropy at home | - |  |  |  |  |
| 2. Entropy at school | $\mathbf{. 2 9}$ | - |  |  |  |
| 3. Entropy with friends | $\mathbf{. 3 3}$ | .18 | - |  |  |
| 4. Support for Catalan in education | $\mathbf{. 3 3}$ | .14 | $\mathbf{. 3 0}$ | - |  |
| 5. Support for Spanish in education | .10 | .06 | .21 | -.27 | - |

Note. Associations that exceeded the benchmark for a weak relationship (.25) are bolded (Plonsky \& Oswald, 2014).

## Chapter 5. Discussion

The goal of this study was to document Barcelona high-school students' attitudes toward Spanish and Catalan, investigating the extent to which these attitudes are associated with their use of both languages in their social networks. Results generally revealed the expected pattern regarding the identity-language links, whereby a stronger sense of either Spanish or Catalan ethnic identity was associated for high-school students with greater support for that language in various social contexts, including in educational settings. However, the students' strongest identity was bilingual, and it appeared to co-exist with their Spanish and Catalan ethnic beliefs. Taken together, these findings suggest the existence of a complex, multifaceted multilingual identity in which languages are not in competition with each other.

## Barcelona High-School Students' Attitudes Toward Catalan and Spanish

Based on prior research investigating links between language speakers' ethnic identity and their language attitudes in conflictual multilingual settings, it was expected that Barcelona high-school students would demonstrate ethnic identity beliefs that are aligned with their views regarding each of their languages. Indeed, the students' ethnic beliefs were generally consistent with their opinions about the role of each language in society (e.g., in education). The students who felt that Spanish was the language defining their personal identity showed greater support for its use as the main national language and expressed weaker support for the Catalan language, culture, and its role in Catalonia's political future. In contrast, the students who felt stronger about Catalan as their ethnic language showed greater support for the Catalan culture and the role of Catalan in Catalonia's political future. It is noteworthy that the students with strong Catalan ethnic beliefs did not seem to perceive Spanish (the majority language of Spain) as a threat, since they also tended to support the use of Spanish as the main national language. However, those who supported Spanish tended to consider Catalan a threat. Put simply, supporting Catalan did not necessarily seem to mean a rejection of Spanish (apart from its use at school), yet supporting Spanish implied a rejection of Catalan. This finding might reflect the antagonistic rhetoric perpetuated after the historic demonstration supporting Catalonia's independence in September 2012, after which both the national and the local media took positions, with the Spanish-language national press, in particular, expressing strong negative opinions about Catalonia and its president at the time (Micó \& Carbonell, 2017). Furthermore, since the $20^{\text {th }}$ century, Spanish has typically been perceived as having lower prestige in Catalonia than Catalan, likely because Spanish is associated with speakers belonging to the working class (Woolard \& Gahng, 1990). Against this backdrop, it is not altogether surprising that the students who identified with Spanish as their ethnic language tended to express a defensive reaction in support of Spanish, coupled with a tendency to reject Catalan. These opinions likely reflect the attitudes of the students' parents which the children heard around them as they were growing up.

Even though the present sample was too small to allow for statistical comparisons between the two schools located in socioeconomically different neighborhoods, the students displayed the pattern shown in prior work for adult residents of Catalonia (Block \& Corona, 2019), where the students from an upper-middle class background predominantly selected Catalan as their L1 and expressed a stronger Catalan identity, whereas the students from less advantaged backgrounds chose Spanish as their L1 and identified more strongly with Spanish. This sociolinguistic divide, which reproduces historical differences between both speaker communities, may also explain, at least partially, the tendency to reject Catalan by the students who claimed a Spanish identity. These students (and their families) might feel economically and socially disadvantaged in an environment that favors Catalan at the
institutional level, and they express their insecurity by rejecting the Catalan language and culture. In any case, whereas the Catalan identity was additive, in the sense that those who claimed it demonstrated a double-positive orientation toward their own group and the outgroup (Gatbonton \& Trofimovich, 2008), the Spanish identity was subtractive.

Nevertheless, it must be noted that the students felt stronger about supporting the language and culture with which they identified, compared to how they felt about rejecting the other language. Put simply, rejection of either language, when it emerged in the students' responses, was moderate at best. These views are compatible with the students' strong sense of affiliation with a bilingual identity, which was also associated with their support for integrated bilingualism, such as the need to preserve Catalan, the minority language. In other words, the students generally seemed to favor maintenance of all their languages rather than supremacy of one above the other, thus demonstrating an attitude toward multilingualism that was more integrative than exclusive. In fact, unlike in prior research conducted in conflictual multilingual contexts such as Israel (Dubiner, 2018; Olsen \& Olsen, 2010) and Québec (Gatbonton \& Trofimovich, 2008), the language identities shown in this study were not mutually exclusive. The students expressed their three identities to different degrees, and a stronger sense of affiliation toward one was generally unrelated to how much or how little they identified with another. Taken together, the students' multilingual identities were not exclusive, but hybrid and fluid (Blackledge \& Pavlenko, 2001), which is the pattern of findings typically found in non-conflictual multilingual settings, where all languages in speakers' repertoires are incorporated into a multifaceted composite identity (Chen et al., 2008; Rajadurai, 2007).

One particularly interesting finding of this study was that the students felt equally proud in being able to speak both Spanish and Catalan, irrespective of their ethnic beliefs. Although similar results have been found in conflictual settings, this double-positive orientation usually involved a neutral language rather than the majority language. For instance, in East Jerusalem, while the attitudes of young Palestinians toward Hebrew were generally negative, English was regarded in a positive light and valued for its international status and for the communication possibilities that it affords (Olsen \& Olsen, 2010). In contrast, the present findings align well with those reported by Rosendal (2017) for Ngoni speakers in Tanzania, where the younger generation, instead of regarding Swahili (the majority language) as a threat to their ethnic identity, expressed favorable opinions about it because of its high communicative value. Similar results were obtained in other non-conflictual multilingual settings, such as with speakers of various minority languages in Vietnam (Nguyen, 2021) or with the Filipino diaspora in Norway (Lanza \& Svendsen (2007). In all these cases, multilingual speakers did not seem to consider language as a core aspect of their ethnic identity, and this was reflected in how they managed their linguistic repertoires. While they used their respective ethnic languages to communicate in their family circles, the majority language in each context was valued for its practical social applications and regarded as a tool for integration and success.

An interim conclusion emerging from the present dataset is that, for some minority language communities, including speakers of Catalan in Spain, language is regarded as a social commodity, not necessarily an ethnolinguistic marker. Regardless of their language identity, the students in this study-representing language speakers who were young children during Catalonia's independence attempt of 2017-appeared largely unaffected by this highly politicized event, in that they regarded positively being able to speak both Catalan and Spanish and generally perceived Spanish as a social tool instead of a menace to the survival of Catalan. This pattern of responses, taken broadly, appears to reflect the trend observed in Catalonia over the past few decades, where Catalan has become an "anonymous" language, meaning that it no longer belongs to a particular ethnic group and is thus available for
everyone to use (Byrnes, 2020; Pujolar \& Gonzàlez, 2013; Soler, 2013; Woolard \& Gahng, 1990; Woolard, 2009). To summarize, for the present sample of Barcelona high-school students, the sociopolitical tensions that they experienced while growing up did not seem to impact their beliefs in the manner expected from previous work, namely, where individuals define their identity by amplifying intergroup differences and adopting an "us-versus-them" rhetoric and behavior (Tajfel \& Turner, 1986). This tendency was especially salient in the case of ethnic beliefs regarding Catalan, a minority language in the broader context of Spain, which is consistent with previous work where minority-language speakers, instead of perceiving the majority language as a threat, appreciate it for its communicative value and incorporate it as part of their identity, thus creating a hybrid bilingual identity where all languages coexist.

## Barcelona High-School Students' Language Identity and Daily Language Use

The analysis of the students' social networks revealed that, unlike their language identities, their Spanish and Catalan networks were mutually exclusive, with Spanish networks being generally larger than Catalan networks. Put differently, the students tended to use almost exclusively only one of the two languages with their interlocutors. However, although the students' networks were largely monolingual, the students also mixed both languages in communication, which was usually the case when a student did not share their L1 or their preferred language of communication with a particular speaker. This finding is consistent with the pattern of language choice observed by Lanza and Svendsen (2007) in the Filipino community in Norway. These speakers' use of a language with a specific interlocutor did not depend on the linguistic composition of their own networks, but rather on the context and the person they were speaking with. For instance, parents who almost exclusively had Filipino networks tended to switch between Tagalog and English or Tagalog and Norwegian when speaking with their children, who were much more at ease using those languages than Tagalog.

With respect to the relationships between the students' language identities and their language use in their social networks, the findings followed a similar pattern to those observed for the students' beliefs and attitudes. The students who identified more strongly with Spanish reported smaller Catalan networks, and their interactions in Catalan were less intimate. In contrast, the students who identified more strongly with Catalan showed no negative associations with intimacy ratings in their Spanish conversations, irrespective of their Spanish network size. Similarly, the students' who expressed a stronger bilingual identity reported a greater sense of intimacy when communicating in either Spanish or Catalan. These findings are comparable to Grim-Feinberg's (2007) observations regarding the Mexican community of Spanish-English bilinguals in the State of New York, for whom the degree of comfort in using the outgroup's language was related to the quality of communication conducted in this language rather than the frequency of its use. Likewise, the students with a stronger Catalan or bilingual identity felt comfortable in using either of their languages and reported a similar degree of intimacy across all of their connections, irrespective of their language of communication. Overall, the students' self-reported social networks seemed to reflect their language beliefs, as discussed above, namely, that they perceived little "menace" from speakers of the majority language, unlike multilingual speakers in other conflictual contexts (e.g., Olsen \& Olsen, 2010), and that they viewed their languages as a social commodity instead of an ethnic marker (Lanza \& Svendsen, 2007; Rosendal, 2017). In short, the students' linguistic behavior was consistent with their beliefs promoting an integrative view of bilingualism in which languages are in complementary rather than competing roles (Creese \& Blackledge, 2011; Nguyen, 2021).

Although language entropy-as a measure of whether the students used their languages in an integrated (i.e., high entropy) versus separated (i.e., low entropy) manner-was not associated with the students' Spanish identity, language entropy showed some weak associations with the students' Catalan and bilingual identities and with their support for Catalan in education. In other words, both Catalan and bilingual identities were associated with a more integrated daily multilingual language use, especially at school, which is consistent with the students' language beliefs and behaviors, as discussed previously. Interestingly, Dubiner (2018) described a similar finding for minority-language speakers from another conflictual multilingual context, Israel. In that setting, the L1 Arabic speakers who reported greater exposure to Hebrew during their studies were more likely to code-switch between Arabic and Hebrew and also expressed a weaker link between language and ethnic identity, compared to the L1 Arabic speakers who were less exposed to the majority language on a daily basis. Although the present study is among the first to use a measure of language entropy in multilingual settings, this finding seems to suggest that higher language entropy (at least, in certain daily domains) is associated with attitudes and behaviors characterizing an integrative view of bilingualism. As such, entropy could potentially be a useful measure allowing researchers to capture and explain differences in speakers' language attitudes in multilingual contexts, especially in conflictual ones.

## Limitations and Future Work

The results of this research are based on a relatively small participant sample, so any generalization beyond the students included in this study requires caution. Participant recruitment was particularly challenging because participation required parental consent, and the topic of language attitudes seems to be a sensitive issue, particularly among older generations of speakers. ${ }^{1}$ To illustrate this point, when initially approached with a request to participate in the study, one school (located in a working-class area on the outskirts of Barcelona) withdrew its consent to participate when the principal learned that written parental consent was required. According to the principal, the subject of the study was going to cause a conflict between parents and the school board. A low participation rate may have also been due, at least in part, to some parents' reticence about the subject of the study, which is again not surprising given polarized and politicized reporting of language issues in the media (López, 2023; Marbán, 2023; Planes, 2023; Vallespín, 2023). This limitation, however, points to a potentially interesting avenue of future research, where language attitudes and practices in Catalonia for older and younger generations could be examined through a comparative analysis. For example, targeting participants from various age groups might clarify the extent to which both younger and older multilingual speakers in conflictual and non-conflictual contexts see their languages as an ethnic marker versus a social commodity.

Another limitation of this study, which could be a good departure point for future work, is the lack of a qualitative element. As Lanza and Svendsen (2007) argued, social network data would benefit from being examined alongside interpretive approaches regarding speakers' language choice and their identity. In fact, to add nuance to their answers, some students in this study included brief comments in several locations in the questionnaire. Although the scope and the logistics of this study did not easily allow for the collection of qualitative data, future investigations could benefit from open-ended interviews with participants in addition to the use of questionnaires.

Finally, an important limitation that must be taken into consideration when examining the present findings pertains to the use of questionnaires as the target research instrument and the focus on self-reports as the main data source. As mentioned above, all questionnaires were filled by participants toward the end of the school year and, perhaps most importantly, in their classrooms. This implied that the environment for data collection did not allow for
participants to remain unobserved when completing the questionnaires and was likely not as quiet as could be desired. Given participants' age group, some might have answered the survey in a certain way in the presence of peers. Additionally, participants' responses may have also been affected by both the researcher and at least one of their teachers who were present during data collection. Although such issues can hardly be avoided in this type of research, it would be important to carefully consider them when interpreting the present results and conclusions and when designing future studies involving child and adolescent multilingual speakers.

## Chapter 6. Conclusions

Although far from being truly representative of the entire population of Catalonia's multilingual youth, this study sheds some light on language identities, beliefs, and practices of adolescents growing up in Catalonia in the aftermath of its most recent 2017 independence project. To summarize, the students' Spanish identity was associated with a moderate rejection of Catalan, seen through both the students' attitudes and their communicative behaviors in their social networks. The students who identified themselves more strongly with Spanish thus tended to express, overtly or subtly, a subtractive view of bilingualism, where both languages are competing with one another (Olsen \& Olsen, 2010). In contrast, the students who identified more strongly with Catalan and those who expressed a bilingual identity tended to have a more integrative view of bilingualism (Creese \& Blackledge, 2011; Dailey-O'Cain \& Liebscher, 2011). Such a perspective, where minority-language speakers perceive the majority language as a social commodity rather than a threat, has been generally observed in non-conflictual multilingual contexts, including Tanzania (Rosendal, 2017), Vietnam (Nguyen, 2021), and Norway (Lanza \& Svendsen (2007). To the best of my knowledge, the present study is the first to document a similar integrative perspective for multilingual speakers in a context such as Catalonia, which is generally characterized by social and political tensions between ethnolinguistic groups. Despite the sociopolitical turmoil that surrounded the students while growing up, their language beliefs did not seem to have been generally impacted by any linguistic or cultural prejudice. At the very least, the present study has revealed complex interactions between language and identity in this specific multilingual setting. In place of the expected inter-group differences and animosity, as observed in similar sociopolitical settings such as Québec, for the Barcelona high-school students, their different language-based identities were complementary in that they contributed to the creation of an integrated bilingual self (Chen et al., 2008; Creese \& Blackledge, 2011; Trofimovich \& Turuševa, 2015). This study, therefore, adds to a growing body of work whose goal is to understand how bilingual identities are created, negotiated, and performed.

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## Appendices

## Appendix A

Participant : $\qquad$ Age: $\qquad$ School year: $\qquad$
Gender:
Male
Female Other
Were you born and raised in Catalonia? __Yes ___No
If yes, in what city? Please indicate:
If not, where? Please indicate:
Mother tongue: __Catalan __ Spanish __Other (please, specify):

## Appendix B

Indicate how well each of these describes you ( $1=$ Not at all; $9=$ Perfectly)

Only Catalan
Only Spanish
Equally Catalan and Spanish
Other (please, specify)
$\begin{array}{lllllllll}1 & 2 & 3 & 4 & 5 & 6 & 7 & 8 & 9\end{array}$
$\begin{array}{lllllllll}1 & 2 & 3 & 4 & 5 & 6 & 7 & 8 & 9\end{array}$
$\begin{array}{lllllllll}1 & 2 & 3 & 4 & 5 & 6 & 7 & 8 & 9\end{array}$
$\begin{array}{lllllllll}1 & 2 & 3 & 4 & 5 & 6 & 7 & 8 & 9\end{array}$

## Appendix C

Indicate the degree to which each of these statements accurately reflects how you feel ( $1=$ Totally disagree; $9=$ Totally agree)

1. I am proud to be Catalan.
2. I am proud to let people know that I am Catalan.
3. I am proud of the achievements of the Catalan nation.
4. I feel proud to see the Catalan flag displayed around me.
5. I feel proud to hear and/or sing the Catalan hymn.
6. I am proud to be able to speak Catalan.
7. I am proud to be Spanish.
8. I am proud to let people know that I am Spanish.
9. I am proud of the achievements of the Spanish nation.
10. I feel proud to see the Spanish flag displayed around me.
11. I am proud to be able to speak Spanish.
12. I feel proud when I hear the Spanish hymn played around me.
$\begin{array}{lllllllll}1 & 2 & 3 & 4 & 5 & 6 & 7 & 8 & 9\end{array}$
$\begin{array}{lllllllll}1 & 2 & 3 & 4 & 5 & 6 & 7 & 8 & 9\end{array}$
$\begin{array}{lllllllll}1 & 2 & 3 & 4 & 5 & 6 & 7 & 8 & 9\end{array}$
$\begin{array}{lllllllll}1 & 2 & 3 & 4 & 5 & 6 & 7 & 8 & 9\end{array}$
$\begin{array}{lllllllll}1 & 2 & 3 & 4 & 5 & 6 & 7 & 8 & 9\end{array}$
$\begin{array}{lllllllll}1 & 2 & 3 & 4 & 5 & 6 & 7 & 8 & 9\end{array}$
$\begin{array}{lllllllll}1 & 2 & 3 & 4 & 5 & 6 & 7 & 8 & 9\end{array}$
$\begin{array}{lllllllll}1 & 2 & 3 & 4 & 5 & 6 & 7 & 8 & 9\end{array}$
$\begin{array}{lllllllll}1 & 2 & 3 & 4 & 5 & 6 & 7 & 8 & 9\end{array}$
$\begin{array}{lllllllll}1 & 2 & 3 & 4 & 5 & 6 & 7 & 8 & 9\end{array}$
$\begin{array}{lllllllll}1 & 2 & 3 & 4 & 5 & 6 & 7 & 8 & 9\end{array}$
13. Speaking Catalan is important for my personal identity.
$\begin{array}{lllllllll}1 & 2 & 3 & 4 & 5 & 6 & 7 & 8 & 9\end{array}$
14. Being able to speak Spanish and Catalan fluently is part of $\begin{array}{lllllllll}1 & 2 & 3 & 4 & 5 & 6 & 7 & 8 & 9\end{array}$ who I am.
15. I feel more like myself when I speak Spanish than when I use any other language.
16. One must speak Catalan often to be considered Catalan.
$\begin{array}{lllllllll}1 & 2 & 3 & 4 & 5 & 6 & 7 & 8 & 9\end{array}$
17. When I speak too much Spanish, I feel like I am betraying my $\begin{array}{lllllllll}1 & 2 & 3 & 4 & 5 & 6 & 7 & 8 & 9\end{array}$ roots.
18. If we do not speak Catalan, in a few generations it will be $\begin{array}{lllllllll}1 & 2 & 3 & 4 & 5 & 6 & 7 & 8 & 9\end{array}$ replaced by Spanish.
19. We live in Spain and, therefore, we must speak Spanish.
$\begin{array}{lllllllll}1 & 2 & 3 & 4 & 5 & 6 & 7 & 8 & 9\end{array}$
20. All children should be educated in Catalonia in Catalan only.
$\begin{array}{lllllllll}1 & 2 & 3 & 4 & 5 & 6 & 7 & 8 & 9\end{array}$
21. Only Catalan should be used in all spheres of public life in $\begin{array}{llllllllll}1 & 2 & 3 & 4 & 5 & 6 & 7 & 8 & 9\end{array}$ Catalonia.
22. Catalonia will never realize its potential for as long as it $\begin{array}{llllllllll}1 & 2 & 3 & 4 & 5 & 6 & \mathbf{7} & \mathbf{8} & 9\end{array}$ remains a part of Spain.
23. A person who does not speak Catalan as their principal $1 \mathbf{1}$ language has no right to consider themselves to be Catalan.
24. The Catalan language and culture of Catalonia have to be $\begin{array}{llllllllll}1 & 2 & 3 & 4 & 5 & 6 & 7 & 8 & 9\end{array}$ preserved at all costs.
25. I should be able to use Spanish in school whenever I want to $\begin{array}{lllllllll}1 & 2 & 3 & 4 & 5 & 6 & 7 & 8 & 9\end{array}$ without being penalized.
26. We should have the option to be educated in Spanish in $1 \begin{array}{lllllllll}2 & 3 & 4 & 5 & 6 & 7 & 8 & 9\end{array}$ Catalonia.
27. Catalonia's school system does not recognize nor value $\begin{array}{lllllllll}1 & 2 & 3 & 4 & 5 & 6 & 7 & \mathbf{8} & 9\end{array}$ Spanish language and culture
28. Catalan should not be imposed on immigrant students, as $\begin{array}{llllllllll}1 & 2 & 3 & 4 & 5 & 6 & 7 & 8 & 9\end{array}$ learning Spanish is enough.
29. It is important for immigrant teenagers in Catalonia to speak $10 \begin{array}{llllllll}1 & 2 & 3 & 4 & 5 & 6 & 7 & 8\end{array} 9$ Catalan, so they can integrate better in the host society.
30. Immigrants benefit a lot from being in Catalonia, so they $1 \begin{array}{lllllllll}1 & 2 & 3 & 4 & 5 & 6 & 7 & 8 & 9\end{array}$ should be loyal to Catalonia and learn Catalan.
31. I do not feel comfortable amongst a group of people that only $1 \begin{array}{lllllllll} & 2 & 3 & 4 & 5 & 6 & 7 & \mathbf{8} & 9\end{array}$ speak Spanish.
32. I tend to get along easier with Catalan speakers than with $1 \begin{array}{llllllll}2 & 2 & 3 & 4 & 5 & 6 & 7 & 8\end{array}$ Spanish speakers.
33. I don't mind speaking in Catalan if I see that the other person $1 \begin{array}{lllllllll}1 & 2 & 3 & 4 & 5 & 6 & 7 & \mathbf{8} & 9\end{array}$ prefers so.
34. I only speak in Catalan; we are in Catalonia and everyone $1 \begin{array}{lllllllll} & 2 & 3 & 4 & 5 & 6 & 7 & 8 & 9\end{array}$ should be able to understand me.
35. Sometimes, I feel rejected by my peers when I speak in $\begin{aligned} & 1 \\ & 2\end{aligned} \mathbf{2}$ Catalan.
36. Growing up in a bilingual community has prepared me better $1 \begin{array}{lllllllll} & 2 & 3 & 4 & \mathbf{5} & \mathbf{6} & \mathbf{7} & \mathbf{8} & 9\end{array}$ to live in today's multicultural world.
37. I am proud of being able to speak Catalan and Spanish because $10 \begin{array}{llllllll}1 & 2 & 3 & 4 & 5 & 6 & 7 & \mathbf{8}\end{array} \mathbf{9}$ it allows me to communicate with more people than if I only spoke one.

## Appendix D

Please, rate the amount of time you use the following languages at home ( $1=$ do not use it at all; $9=$ use it all the time)

| Spanish | 123456789 |
| :--- | ---: |
| Catalan | 123456789 |
| Other (please, specify)_ | 123456789 |
| Other (please, specify) | 123456789 |
| Other (please, specify) | 123456789 |

Please, rate the amount of time you use the following languages at school ( $1=$ do not use it at all; $9=$ use it all the time)

## Spanish

Catalan
Other (please, specify)
Other (please, specify)
Other (please, specify)

123456789
123456789
123456789
123456789
123456789

Please, rate the amount of time you use the following languages with your friends ( 1 = do not use it at all; $9=$ use it all the time)

| Spanish | 123456789 |
| :--- | ---: |
| Catalan | 123456789 |
| Other (please, specify) | 123456789 |
| Other (please, specify) | 123456789 |
| Other (please, specify) | 123456789 |

What percentage of time would you speak the following languages daily?
$\begin{array}{llllllllllll}\text { Spanish } & 0 \% & 10 \% & 20 \% & 30 \% & 40 \% & 50 \% & 60 \% & 70 \% & 80 \% & 90 \% & 100 \%\end{array}$
$\begin{array}{llllllllllll}\text { Catalan } & 0 \% & 10 \% & 20 \% & 30 \% & 40 \% & 50 \% & 60 \% & 70 \% & 80 \% & 90 \% & 100 \%\end{array}$
$\begin{array}{llllllllllll}\text { Other (please, } & 0 \% & 10 \% & 20 \% & 30 \% & 40 \% & 50 \% & 60 \% & 70 \% & 80 \% & 90 \% & 100 \%\end{array}$ specify) $\qquad$
$\begin{array}{llllllllllll}\text { Other } & \text { please, } & 0 \% & 10 \% & 20 \% & 30 \% & 40 \% & 50 \% & 60 \% & 70 \% & 80 \% & 90 \%\end{array} \quad 100 \%$ specify) $\qquad$
$\begin{array}{llllllllllll}\text { Other } & \text { please, } & 0 \% & 10 \% & 20 \% & 30 \% & 40 \% & 50 \% & 60 \% & 70 \% & 80 \% & 90 \%\end{array} \quad 100 \%$ specify) $\qquad$

What percentage of time would you listen (e.g., music, movies, social media) in these languages daily?
$\begin{array}{llllllllllll}\text { Spanish } & 0 \% & 10 \% & 20 \% & 30 \% & 40 \% & 50 \% & 60 \% & 70 \% & 80 \% & 90 \% & 100 \%\end{array}$
$\begin{array}{llllllllllll}\text { Catalan } & 0 \% & 10 \% & 20 \% & 30 \% & 40 \% & 50 \% & 60 \% & 70 \% & 80 \% & 90 \% & 100 \%\end{array}$
$\begin{array}{llllllllllll}\text { Other } & \text { (please, } & 0 \% & 10 \% & 20 \% & 30 \% & 40 \% & 50 \% & 60 \% & 70 \% & 80 \% & 90 \%\end{array} \quad 100 \%$ specify) $\qquad$
Other (please, $\quad 0 \% \quad 10 \% \quad 20 \% \quad 30 \% \quad 40 \% \quad 50 \% \quad 60 \% \quad 70 \% \quad 80 \% \quad 90 \% \quad 100 \%$ specify) $\qquad$

Other (please, $\begin{array}{lllllllllll} & 0 \% & 10 \% & 20 \% & 30 \% & 40 \% & 50 \% & 60 \% & 70 \% & 80 \% & 90 \%\end{array} \quad 100 \%$ specify) $\qquad$

## Appendix E

List up to 20 people with whom you habitually interact. On the left column, draw arrows to indicate which of the listed people know one another. You don't need to use their real names.



[^0]:    ${ }^{1}$ Being a regular user of Catalan still correlates strongly with belonging to the middle-upper class (Block \& Corona, 2019).

