

# LINGUISTIC DIVERSITY IN AVEIRO, PORTUGAL: EXPLORING LINGUISTIC LANDSCAPE METHODOLOGIES IN THE «BEIRA MAR» NEIGHBORHOOD

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**Abstract:** The present exploratory study aims to reflect upon some aspects of the linguist diversity within the linguistic landscape of a Portuguese city (Aveiro). We will first present some of the most common choices, debates and innovative approaches concerning research methodologies in linguistic landscape studies. Secondly, we will present the analysis of the linguistic diversity displayed in the linguistic landscape of the « Beira Mar» neighborhood of Aveiro. The analysis shows that English is the foreign language with the greatest presence in all areas of activity and in monolingual, bilingual and multilingual signs. Within the results we also discuss the choices that were made and the impact of inclusion/exclusion criteria assumed in this exploratory study.

**Resumo:** O estudo exploratório que aqui damos a conhecer tem como objetivo refletir sobre alguns aspetos da diversidade linguística presente na paisagem linguística de uma cidade portuguesa (Aveiro). Para tal, primeiramente apresentaremos as opções e debates mais comuns nesta área em torno da sua própria metodologia, bem como as abordagens inovadoras desenvolvidas. Seguidamente, apresentaremos a análise da diversidade linguística manifestada na paisagem linguística do bairro da «Beira Mar» em Aveiro. A análise mostra-nos que o inglês é a língua estrangeira com maior presença em todas as áreas de atividade socioeconómica e em sinais monolíngues, bilingues e multilingues. Nos resultados discutimos ainda as opções tomadas e os impactos dos critérios de inclusão/exclusão das fotografias assumidos neste estudo exploratório.

**Keywords:** linguistic landscape, linguistic diversity, methodologies, «Beira Mar» neighborhood



The human presence on the Earth's landscapes became more evident and exuberant than ever before, leading to massive changes on the world's surface. This also includes the landscape in urban settings, namely the linguistic panorama that we can observe written in cities, what we call *linguistic landscape* (henceforth LL). LL is seen as a new approach to multilingualism representing a way to understand it, focusing on the research of the "written language used in public space, including non-commercial and official signage" (Gorter, 2006a; 2006b; 2012, p. 9). LL is traditionally understood as the written texts present in public spaces (Landry & Bourhis, 1997), specifically "The language of public road signs, advertising billboards, street names, place names, commercial shop signs, and public signs on government

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buildings” (p. 25). This first definition, although embracing and heading several (almost all) research on LL, is being enhanced with new topics from recent research as the complexity of the field grows and the need for the concept to be extended stands out: “(LL) needs to be expanded in its definitions, components, interpretations, implications and implementations” (Shohamy & Waksman, 2009, p. 314).

Pertaining to the methodology, researchers recognize that the novelty of the field comprises some methodological flaws and inconsistency that will be summarized in the first part of this article.

The article begins with the presentation of some aspects of the LL framework with particular focus on methodological questions. This reflection intends to summarize some of the linguistic landscape methodology for surveying and analysing data, such as the definition of LL ‘sign’, the unit of analysis, the representativeness of LL data and the organization of the *corpus* of LL pictures. This will lead to our main objective which is presenting the exploratory study of some of the LL data of a neighborhood from the center of a small Portuguese city (Aveiro).

## 1. AN OVERVIEW OF THE LINGUISTIC LANDSCAPE’S METHODOLOGICAL QUESTIONS

As a recent field, LL studies face their methodological debates (or ‘problems’ as Backhaus, 2006, refers to them) around their main purpose, the study of languages through verbal signs/textual form in public spaces, commonly used inside cities.

Beginning with the very concept of LL, some researchers discuss the adequacy of the term, arguing that ‘multilingual cityscape’ would be more appropriate than ‘linguistic landscape’ (Gorter, 2006; Spolsky, 2009; Aiestaren, Cenoz & Gorter, 2010). Moreover, Gorter (2006) observes that owing to the fact that “(...) in most places the cityscape due to globalization will not be monolingual, the term ‘multilingual cityscape’ would be the most precise” (p. 83). However, Gorter (2006) draws attention to the major difficulties in the translation into other languages that this term would bring.

The debates around what is to be considered LL or what LL studies should take into consideration are still very present in the discourses of the field. We have seen above the need for LL to be expanded (Shohamy & Waksman, 2009) to what has more recently been added (Gorter, 2012), the field should go further not limiting the studies to written language and to the variation in text types, “(...) they should relate to images, colours and other visuals, as well as voices, music and sound and to dynamic changes in the physical (mainly urban) surroundings” (Gorter, 2012, p. 11).

Besides the concept of LL and what it includes, the debate focuses also on the process of collecting the data, on their interpretation/description and on the conclusions to be drawn from them. According to Huebner (2009) the study of verbal signs is rather

Handicapped by lack of agreement on a title, no clear consensus has yet developed on methodology or theory. (...) Because of the quite different distributions of spoken and written language, and because it is easier to identify and count the language of signs than of conversations, it risks misinterpretation, recording the state of literacy rather than the status of spoken varieties. (p.32)

On the whole the main discourses on LL methodology are in agreement and many researchers point out the same problems even if some discourses vary. In Malinowsky’s (2009)

research one may read the findings of his debate on LL authorship which are the product “of interviews, participant observation, photograph and media analysis, and interpretative walking/driving tours” (p. 111). Hult (2009) mentions that LL analysis is methodologically supported by photography and visual analysis, also stating that “As a relatively new tradition of research, the precise practices of linguistic landscape analysis are still being developed (...)” (p. 90). The same author explains that LL analysis has focused on the quantitative analysis of visual signs or linguistic objects in terms of categories (for instance the presence of specific languages, their order of appearance, the size of letters, etc.).

We will focus this discussion on what Backhaus (2009, p.60) refers to as the ‘methodological problems’ that one may find in empirical research on LL. First of all, we will summarize the qualitative–quantitative discussion.

According to Backhaus (2007), the studies that follow a qualitative approach are not concerned with a clearly defined and systematically collected sample of signs in the way quantitative studies are. Backhaus considers that those studies are somehow limited to trends observation: “It is rather dubious, however, to observe trends such as ‘a considerable increase in the amount of Japanese writing’ in Hong Kong (Scollon & Scollon, 2003: 133, my emphasis) in the absence of quantitative data to confirm this assessment” (p. 60). Some examples of the later approach are the

“discrepancies between official language policies and everyday linguistic practices; different formats of multilingual messages and their implications with regard to the linguistic profile of the population; (...) the overall significance of the linguistic landscape for the semiotic construction of the public space (Backhaus, 2006, p. 60).

However, Blommaert and Huang (2010), on their materialistic and ethnographic approach to LL signs in public space, consider that Backhaus’s study lacks a better comprehension of the socio-cultural meaning of signs and languages that would be achieved through qualitative analysis. Blommaert and Huang’s (2010) study places LL signs in the semiotic analysis, more precisely on geosemiotics which is dedicated to the study of ‘language in the material world’ (Scollon & Scollon, 2003). Rather than using the term LL ‘language’ they follow a semiotic terminology replacing ‘language’ by ‘signs’. In accordance with these authors the qualitative analysis of LL signs can help to build knowledge around the meanings of signs according to their emplacement and to the addressees they select, being also related to the definition of identities in public spaces. Emphasizing the multimodal character of LL signs and the relevance of the specific context where these signs are placed, Blommaert and Huang (2010) support the idea that the attention to semiotization, or the interest on multimodal signs, transforms space into “a genuinely ethnographic object, full of traces of human activity, interactions, relations and histories” (p.13).

Following an interpretative and analytical approach of semiotic landscapes, the research carried out by Jaworski and Yeung (2010) is concerned with the socio-cultural ‘reading’ of space with regard to the placement of material language, namely the linguistic and other semiotic choices displayed in signs indexing residential buildings in Hong Kong. Still on semiotic landscapes, Jaworski and Thurlow (2010) state that actually “all landscape is semiotic” because its meaning is built during socio-cultural interpretation. By semiotic landscape the authors mean “any (public) space with visible inscription made through deliberate human intervention and meaning making” (p. 2).

LL research had also caught the interest of the visual culture area that considers images as a social practice. An example of this later research is the study undertaken by Guilat (2010) whose main objective was to understand how painting utility boxes in a small city of Israel could

be explained through visual culture as the creation of urban visual texts and also as a social exercise related to the practice and power of ideology. Guilat (2010) follows a “qualitative ethnographic approach to the gathering and analysis of data and invokes extensive historical, iconological and visual-culture research (...)” (p. 39).

Bearing in mind the qualitative-quantitative discussion, Hult (2009) mentions that by interpreting quantitative data from LL one can draw implications about societal issues related to languages giving the examples of ethnic/social conflicts and solidarity expressed through language choices, the power of official and non-official signage, and the contrast or gap between ‘hidden agendas’ in language policies and reality (see Shohamy, 2006, for instance). Bogatto and Hélot (2010) presented a study of the «Quartier Gare» in Strasbourg adopting a quantitative approach but focusing more on qualitative issues, such as strategies of demarcation, identification and appropriation of space by the written signs. Their study looked at the multilingualism of ‘urban writing’, analysing the relationship of power between the languages displayed at the symbolic and social levels, and identifying not only an increasing linguistic diversity in signs but also different modalities of language contact.

We may find LL portrayed both as a process and/or result of diverse agendas, of social action, being a tool for contestation, participation and inclusion in public spaces (Shohamy, 2009, 2012), and as a methodology to analyse language in society (Gorter; Barni & Bagna, 2009). In Huebner’s (2009) words, LL can be considered “(...) a barometer of the relationship between language and society (...)” (p. 84). Discussing LL as a methodology for researching the way language is used in society, Hult (2009) states that “(...) as linguistic landscape analysis continues to mature as a sociolinguistic methodology, it may be useful to seek out systematic ways to make interpretations about the distribution of languages in public spaces” (p. 91).

Next, we will briefly discuss the definition of signs in LL, the unit of analysis, as well as representativeness and categorization questions. Along with the expansion of the LL concept, these can be considered the main topics of discussion concerning LL methodologies, being the aspects that distinguish the field, the growing interest and the diversity among the research done so far.

## **SIGNS, UNIT OF ANALYSIS, REPRESENTATIVENESS AND CATEGORIZATION**

Authors such as Gorter (2006), Cenoz and Gorter (2006), Backhaus (2006), Huebner (2009), Bogatto and Hélot (2010) emphasise the ‘problem of sampling’ (Gorter, 2006) as the first of the methodological problems of LL surveys. In fact, the sampling definition, or rather the constitution of the *corpus* and the identification of the unit of analysis are important decisions to be made. The definition of the unit of analysis differs in the different studies developed so far, which confirms a degree of arbitrary choice regarding the criteria followed. As Cenoz and Gorter (2006) argue, the codification of different pictures presents difficulties related to the establishment of the unit of analysis, so the exclusion of what is not to be considered and the clear definition of what is to be considered involves a certain degree of arbitrariness. In their study, they decided that each establishment, and not each sign in separate, would be considered the unit. This unit may be composed by several different texts that belong to the establishment, for instance, the placard with the name of the shop/company, advertising posters

and stickers indicating smoking prohibition in the window of that establishment together are all part of the same unit.

Other questions arise besides the *corpus* composition, such as the representativeness of LL data for a certain city (Gorter, 2006). This is the reason why we prefer to use the term *corpus* rather than sample. At this point we should emphasise that the LL research represents one possibility to understand urban multilingualism and linguistic diversity and, for this reason, “the data are not meant to indicate the linguistic composition of the city as a whole, but simply an illustration of the range of linguistic diversity” present in the city or at part of the city, as Huebner enlightens (2006, p. 50). This reservation is also present in Barni and Bagna’s (2010) contribution to define the LL methodological paradigm, expressing that LL “is just one part of the whole universe of the vitality of contact and language use” (p. 138). As we have seen before, LL analysis reveals not only aspects of linguistic diversity, of language policy and/or the effects of language contact but other sociolinguistic phenomena as well as the linguistic consequences resulting from the processes of globalization, namely through the increasing presence of English language in public spaces.

Backhaus (2006) defines the LL ‘sign’, his unit of analysis, as a text in its written form: “(...) any piece of written text within a spatially definable frame” (p.55). Following the LL definition proposed firstly by Landry and Bourhis (1997) – the language of public and commercial signs –, Backhaus (2007) explains that “Used on public signs, language comes in its written form” (p.8).

Bearing in mind the question brought by Gorter (2006), “(...) are texts on moving objects such as buses or cars to be included?”, there has been some degree of reluctance in considering these texts although they are part of the LL, such as the texts displayed in city buses/trams, tourist guides, newspapers or cars (p.3). Yet, Barni and Bagna (2009), as we may see in the next section, argue that the texts are static even though they are physically mobile when considering text displayed on motor vehicles. Also on this issue, Ben Said (2011) advocates that the bigger is the range or type of signs considered more possibilities are created to capture the diversity of LL, strengthening the validity of LL studies while providing more a representative and holistic portrayal of the linguistic and semiotic context. Ben Said (2011) still recognizes the challenge that the ‘transient, historical and ephemeral nature of signs’ represents to the researcher.

The texts present on moving objects, such as buses/taxis/trams, or the texts displayed in digital screen panels (mostly advertisements or news) are a visual element with increasing impact in urban landscape. Even if we are studying small cities, texts on moving objects may be interesting data to take into consideration as well as in the case of bigger cities, having in mind Piccadilly Circus (London), or Times Square (New York), where they have the potential to become the main focus of research. As a matter of fact, collecting LL data from moving objects is more difficult as it depends on quite specific timetables or instants and angles or even proper traffic situations. The already stated need to include a broader linguistic panorama of cities might require the inclusion of a complementary source for collecting LL data in addition to the widely used digital camera: the video camera.

In fact, for collecting LL data and proceed with a consistent analysis there are fundamental questions that must be answered since the very beginning of the research: *where* the data collection is going to take place (e.g. a single street, an avenue, a square, a neighborhood, the whole city, etc.), *which* LL objects are going to be photographed and which are not to be photographed if any (e.g. pedestrian directional signage, shop windows, advertisement, posters, public transports, postcards, etc.), *what* is going to be ‘read’ in the LL

(e.g. verbal text, non verbal text, text-image, buildings/architecture, etc.), *who* is going to produce meanings about a specific LL (e.g. only the researcher, the researcher and the inhabitants or shop owners, or adults, or children/students or teachers).

The next issue is on how to categorize signs. The traditional distinction of LL signs is based on 'bottom-up' and 'top-down' categories which distinguish, among the actors who participate in the dynamics of the LL, the non-official from the official signs. Following Ben-Rafael et al. (2006), LL can be described as a scene made by streets, corners, circuses, parks and buildings where the public life of the societies takes place and where both public and private actors act shaping the LL according to the dominant culture, in the case of the former, or creating more free strategies to write on the cityscape, in case of the individuals/private actors. There are other possibilities of categorization of LL signs whether they are monolingual or multilingual ones. In the case of multilingual signs, Reh (2004) proposed a taxonomy for the study of Lira municipality (a town in Uganda). On Lira's municipality research Reh suggested a taxonomy for the categorization of multilingual writing, describing it according to the spatial mobility of the objects inscribed (if they are physically fixed or if they are movable), the visibility of multilingualism (distinguishing between 'visible' and 'covert' multilingualism) and the way in which multilingual text is arranged. Therefore, Reh considered four different types of multilingual information, suggesting possible combinations of languages and information in the text: 'duplicating', 'fragmentary', 'overlapping' and 'complementary'. Based on Reh's example and borrowing terms from musicology, Backhaus (2006, 2007) introduced a slightly different terminology for his analysis of Tokyo, identifying four types of 'part writing': 'homophonic', 'mixed', 'polyphonic' and 'monophonic'. The 'homophonic' type is concerned with signs containing two or more languages, where the information is fully translated or transliterated. In the 'mixed' type of part writing the author makes no distinction between 'fragmentary' and 'overlapping' multilingualism present in Reh's taxonomy, including signs that provide only some information in all languages or the whole message in one language and varying parts in one or several other languages. The 'polyphonic' type includes signs that have several languages completely independent of each other in content. Finally, Backhaus introduced a new category containing signs in only one language which he named 'monophonic part writing'. This category distinguishes four different patterns: single words, slogans/catchphrases, business names and other patterns that do not suit the previous ones.

Still with regard to the taxonomy of the LL signs, Spolsky and Cooper distinguished eight types in their 1991 study about the languages of Jerusalem, listed as follows: 1) street signs; 2) advertising signs; 3) warning notices and prohibitions; 4) building names; 5) informative signs (sub-categories: directions, hours of opening); 6) commemorative plaques; 7) objects (sub-categories: postbox, police call box); 8) graffiti (Spolsky, 2009).

Ben-Rafael et al. (2006) categorized signs following the 'top-down' versus 'bottom-up' distinction and consequently according to areas of activity. The authors encoded the LL 'top-down' signs according to their belonging to national/local, cultural, social, educational, medical or legal institutions; and encoded the 'bottom-up' LL signs according to areas such as professional, commercial and services.

On the following section we emphasize the innovative perspective of non market-values of linguistic diversity within the LL and the new methodologies in sociolinguistic research introducing a mapping technique of the LL.

## NON MARKET-VALUES OF LINGUISTIC DIVERSITY WITHIN THE LINGUISTIC LANDSCAPE

An innovative perspective is brought into discussion by Cenoz and Gorter (2009) proposing a research method based on the links between language and economics provided by Grin (1996; 2006) that follows the example of the non-market value of marine quality adapted from Nunes and De Blaeij (2005). Both frameworks guided Cenoz and Gorter's proposal of the method that introduces the non market-value of linguistic diversity within LL with the suggestion of using the Contingent Valuation Method (CVM), an economic valuation methodology. CVM is frequently used in cost-benefit analysis and environmental impact assessment and basic infrastructural projects in developing countries (Diamond & Hausman, 1994; Venkatachalam, 2004).

According to Cenoz and Gorter, the values given to languages add the idea that LL is important in economic processes. In their reflection, they comment on the presence of English as a characteristic inherent to the process of globalization. As Cenoz and Gorter mention (2009), "one of the causes for the spread of English is globalization, a process usually defined in economic terms of markets, production and consumption" (p. 57). One may conclude that communication (and of course the planned use of specific languages and their physical distribution/presence in public space) has an extremely important and even active role to play. For instance, "By using English businesses aim at increasing their sales and thus its presence is motivated by economic reasons" (Cenoz & Gorter, 2009, p. 57). In their study comparing the cities of Donostia/San Sebastian in the Basque Country (Spain) and Ljouwert-Leeuwarden in Friesland (Netherlands), Cenoz and Gorter (2006) found a high number of English signs, a fact they justify by recognizing English as the major channel of global communication and being related to tourism.

With regard to linguistic diversity within LL, linguistic diversity is understood as the number of languages included in the LL signs. Linguistic diversity can be assessed in two different ways: as the absolute number of languages and as the percentage of the population speaking the most frequently used language (Skuttnabb-Kangas, 2002). To better understand the linguistic diversity dimension, we shall refer the transdisciplinary approach of Maffi (2001), Harmon (2002) and Skuttnabb-Kangas (2002) that reinforce the value of linguistic diversity by linking it to bio- and cultural diversity. This later interdependence is also well documented in the UNESCO Universal Declaration on Cultural Diversity (2002) and in the Convention on the Protection and Promotion of the Diversity of Cultural Expressions (UNESCO, 2005), underlining that linguistic diversity is a cultural good and that "languages are an intrinsic part of the diversity of cultural expressions" (UNESCO, 2005, p. 13).

In the non-market values approach, the linguistic diversity in the LL can have a use value (with a market value) and a non-use value (without a market value), although quite difficult to estimate as Cenoz and Gorter recognize. Use value can be direct or indirect. Direct value is concerned with an exchange value, i.e, the meaning of the signs is understood because they are in a language citizens understand, and/or it offers the possibility of practicing the languages citizens know. Indirect value, regarding the non existence of explicit market values, includes the avoided costs by having the ecosystem available for citizens. This means increasing possibilities to attract tourism due to the linguistic "friendly" environment because signs are understood; the possibility of working towards integration of different minorities, preventing situations of conflict; and, finally, to provide an image of a modern, cosmopolitan and multicultural city.

With regards to the non-use values within linguistic diversity, these can be described as bequest and existence values. The first category concerns the value of languages preserved for future generations, and the latter is related to the additional benefits that citizens have from knowing that a certain language exists in the LL.

In brief, the economic approach opens the possibility to focus on the language use claiming that LL can be an important element for economic processes. Likewise, LL's economic values can be related to sustainable development dimensions since the latter are concerned with the economic, environmental, social and (multi)cultural aspects of societies. This relation between LL and sustainable development is to some extent attached not only to the symbolic function of LL but also to the diverse agendas that share and shape the public space, such as "(...) economic ones as in the case of advertising and marketing; social agendas as in the case of writings that include or exclude certain groups, or ecological, as in the case of promoting 'green' environments" (Shohamy & Waksman, 2012, p. 110). As for the symbolic function, LL has become a sort of "(...) arena of symbolic struggle and debate about participation and distribution of resources in cities, work places, schools, neighborhoods, national and global spaces" (Shohamy & Waksman, 2012, p. 111). Furthermore, the non-market values of linguistic diversity within the LL may become rather helpful to understand the trends and effects of globalization on urban multilingualism, tourism incomes and commercial activity.

#### **NEW METHODOLOGIES IN SOCIOLINGUISTIC RESEARCH: A MAPPING TECHNIQUE – MAPGEOLING 1.0.1**

Other perspectives on LL, focused on the methodological development of the field, are brought by Barni and Bagna (Barni 2006; Bagna, 2006, Barni & Bagna, 2009) addressing the LL as a layer in mapping and measuring linguistic diversity.

According to these authors, LL is a methodology that focuses on the public use of languages. In this sense, LL research aim is to develop "digital maps of a territory which present the distribution of languages through social communication texts such as signs, graffiti, posters, public notices, advertisements" (Barni & Bagna, 2009, p. 128). Their purpose was to detect the "static" visibility and vitality of the languages, surveying the presence of "static" signs. Barni and Bagna (2009) understand "static" as the condition of the texts displayed, including the ones written on motor vehicles because they are static traces although physically mobile.

Pursuing the objective of measuring and mapping the linguistic diversity within a certain territory, in particular in Italy, the *Centre of Excellence for Research Permanent Linguistic Observatory of the Italian Language for Foreigners and Immigrant Languages* at the University of Siena, developed three methods. The first one, the Toscano favelle model, was an application which passes from quantitative to qualitative statistical data to a demolinguiistic paradigm; the second model, the Monterotondo-Mentana, used advanced technologies as well as traditional tools, such as questionnaires, audio/video recordings, for collecting data; and finally the Esquilino model focused on the LL signs (Barni, 2006). This third model's main purpose was to detect the "static" visibility and vitality of languages, georeferencing their location. In order to proceed with the precise location and co-ordinates, the *Centre* developed specific software for the creation of digital maps, the MapGeoLing 1.0.1 (Bagna & Barni, 2006). This instrument was created for mapping linguistic diversity and georeferencing the diversity in a certain territory, being especially designed for the LL analysis, allowing both synchronic and diachronic data analysis and combining quantitative and qualitative data.



## 2. ANALYSING THE LINGUISTIC LANDSCAPE OF A PORTUGUESE CITY

Aveiro is a small city located at the Atlantic coast in the centre of Portugal with 77 884 inhabitants (PORDATA, 2012). By the year 959 Aveiro had become an important commercial area mainly due to the salt production, still in practice today. Only in 1759 did Aveiro acquire the status of city. During the eighteenth century the city saw a new urban planning and in the beginning of the twentieth century the Art Nouveau buildings emerged brought by the architect Silva Rocha. The *Art Nouveau* heritage still characterizes the urban landscape of contemporary Aveiro as well as the Ria water channels and the ceramic tiles decorating both buildings and signs with street names.

The main purpose of this exploratory study is to discuss some aspects of the linguistic diversity present within the LL of the «Beira Mar» neighborhood, located in the center of Aveiro (the map is available in [http://www.aveiro.eu/uploads/fl\\_469.pdf](http://www.aveiro.eu/uploads/fl_469.pdf) where we may find in the first circle the perimeter of our exploratory study). The data of this exploratory study belongs to a broader research where we, in a first moment, analyse the linguistic diversity of Aveiro through its LL, and then, in a second moment, explore the educational potential of this very LL to develop an interdisciplinary guidebook to be used by primary school teachers.

The process of collecting data and putting it into analysis entailed distinct phases:

1. Establishing the perimeter for surveying;
2. First field data collection in 2011, i.e, collecting LL pictures using a digital camera;
3. Establishing the *corpus* of analysis to proceed with the exploratory study (group the data into different streets, selecting the pictures according to the established criteria);
4. Uploading the pictures and proceeding with the analysis of the data testing the WebQDA software.

From a *corpus* of 17 photographed streets situated in the «Beira Mar» neighborhood (Aveiro), we chose to analyse pictures from 4 streets, Rua João Mendonça, Rua Dr. Barbosa Magalhães, Rua dos Mercadores, Rua Clube dos Galitos; 1 quayside, Cais dos Botirões; and 1 square, the Rossio. The «Beira Mar» neighborhood has a cultural heritage value and is a site of tourist interest, namely through the presence of *Art Nouveau* buildings, the Ria and water channels, 'moliceiro' boat trips stations, restaurants, bars and shops selling the traditional sweet of the city ('ovos moles') and salt products, being for these reasons very popular among tourists who visit the city.

To proceed with the analysis we selected a small group of 21 pictures due to the fact that we were testing the adequacy of WebQDA qualitative software for LL analysis (version 0.9; Neri de Souza, Costa & Moreira, 2011a; 2011b). The common criterion for the picture selection for this exploratory analysis was the presence of other languages besides Portuguese; we also chose to consider the text present whether in mobile or "static" objects.

It is important to explain that we made the assumption that the Portuguese language prevails in Aveiro, since this is the official language of the Portuguese state, law, instruction, and also the language present in official public information, and in services/goods/publicity, as stated in the law decree no. 238/86 of 19th August. This decree determines that the information

about the nature, characteristics and guarantee of goods and services, including advertising, must be offered to the public in Portuguese language. If the information is written in foreign language(s), it is mandatory its full translation into Portuguese language. These are the reasons why we determined the presence of languages other than Portuguese as a first criterion, in order to get a first idea of the diversity present in the LL of the «Beira Mar» neighborhood.

The units of analysis of the pictures selected were found in: façades of commercial establishments (including branding, posters, menus, stickers, cards, flags), or mobile panels that belong to commercial establishments (Figure 4), or other mobile objects (such as the truck 'The Centro Experience', figure 1). Each establishment or mobile object, as we may see in the figures below, became the unit of analysis rather than the individual signs each establishment/mobile object displayed. Due to this we have selected 21 pictures and analysed 26 signs in the varied units of analysis. We chose not to consider journals, magazines, books and games displayed in the shop windows or in front of the establishments for this analysis.

**FIGURE 1** EXAMPLE OF A MOBILE OBJECT



**FIGURE 2** CHINESE RESTAURANT 'FU HUA' FAÇADE



**FIGURE 3** KIOSK (BUS TICKET POINT OF SALE):  
EXAMPLE OF ONE UNIT OF ANALYSIS WITH SEVERAL  
SIGNS



**FIGURE 4** EXAMPLE OF A MOBILE PANEL FROM  
THE HOSTEL 'MORGAN & JACOB'S  
GUESTHOUSE'



**FIGURE 5** HOSTEL FAÇADE, BAR 'MORGAN & JACOB'S GUESTHOUSE'



Bearing in mind previous studies on LL and intending to reflect upon the linguistic diversity of one neighborhood of Aveiro, we developed an analysis that included, among others, the following general variables: the languages present on the signs, the area of activity and the

number of languages used on the signs. The latter variable included monolingual signs, having only one language, bilingual signs containing two languages, and multilingual signs with three or more languages. The next table shows us the synthesis of the data, reporting the areas of socioeconomic activity identified and the languages found in the selected places.

**TABLE 1 SYNTHESIS OF THE DATA OF THE EXPLORATORY STUDY**

Place name	Area of activity	Languages found
Rua João de Mendonça (street)	<b>Catering</b> 1 Restaurant 1 Patisserie <b>Education Institution/Activity</b> 1 Studio of sweets	English, Mandarin, Portuguese Spanish,
Rua Dr. Barbosa de Magalhães (street)	<b>Catering</b> 1 Restaurant	English, French, Portuguese, Spanish
Rua dos Mercadores (street)	<b>Tourism</b> 1 Souvenirs shop <b>Stationary shops</b> 1 Stationary shop	French, Portuguese
Rua Clube dos Galitos (street)	<b>Education Institution</b> 1 School of languages <b>Tourism</b> 1 Kiosk	English, Portuguese, Spanish
Cais dos Botirões (quayside)	<b>Hotels</b> 1 Inn/snack-bar <b>Tourism</b> 1 Tourism truck	English, Portuguese
Rossio (square)	<b>Education Institution/Activity</b> 1 School of languages <b>Catering</b> 1 Restaurant <b>Hotels</b> 1 Hotel <b>Tourism</b> 1 'Moliceiro' boat trips ticket point of sale	Portuguese, Spanish, English, French

As we may see in the table above, there are five different areas of socioeconomic activity identified: catering, hotels, tourism, stationary shops and education institutions/activities.

In the section that follows, we will give a closer look at the results of the linguistic diversity within the mentioned places.

### 3. RESULTS AND DISCUSSION

This section examines the results of this exploratory study, pursuing the objective of reflecting about the linguistic diversity of the LL present in one neighborhood located in the center of Aveiro. We identified the languages displayed in this area, the combinations of languages in the signs and the predominant languages per area of activity.

In relation to the languages present on signs, we found that English has a major presence with 21 references, followed by Spanish with 7 references, French with 6 references and Mandarin with 2 references.

Then we decided to analyse the number of languages used in each sign (see Table 2), classifying them as monolingual, if there is only one language in the sign, bilingual, if there are two languages, and multilingual, if there are three or more languages. We observed that the



predominance of English among foreign languages is also present in monolingual, bilingual and multilingual signs. English is present in 3 monolingual signs; in 8 bilingual signs and in 7 multilingual signs. The use of English seems to have a double function: informative, in the case of touristic activities where text gives information about locations, prices and timetables and restaurant menus; and symbolic, as in the case of the name of a hostel 'Guesthouse Morgan & Jacob's' (Figure 5) and a mobile panel (Figure 4) that belongs to the bar of that same hostel announcing a special price of Guinness beer only in English, also with the slogan "be my guest..." only in English. Modernity, youth, urbanity, cosmopolitanism may be some of the values attached to this option. On the other hand, Spanish appears only in multilingual signs, datum that we will discuss in the conclusion. The value "0" for signs with monolingual Portuguese language is justified by the inclusion criteria to consider only signs that contain other language besides Portuguese.

Recognizing the exploratory character of this study and the necessary delimitation of the places to be analysed, we emphasise thus the scarce presence of Mandarin and the absence of other immigrant languages such as Ukrainian and Russian within this neighborhood. To properly discuss the presence of the languages of immigrants we must analyse a broader perimeter and focus on the functions of languages displayed in public spaces, on vitality and visibility, but also on the type of socioeconomic activity that these immigrants have. The statistics of *Portugal's Border and Foreigner Service* accounted 749 Chinese inhabitants in Aveiro in 2012 (SEF, 2012). The Chinese community is the third largest immigrant community in Aveiro, preceded by the Ukrainian community with 2621 inhabitants and the Brazilian community with 3311 inhabitants (SEF, 2012). At the moment we have not found evidences of Ukrainian (2621 inhabitants) or Russian language (402 inhabitants) within the LL of the «Beira Mar» although we have collected LL documentation that shows these languages in other areas of Aveiro with a lower presence when compared to Mandarin. This lower presence is related to the socioeconomic activity that immigrants have in Aveiro. In the case of Chinese people, they are more prompt to integrate in the community by establishing their own businesses, namely Chinese cuisine restaurants and utilities and clothing shops, being these the socioeconomic areas where mandarin is displayed in the LL. The other places where we may find Ukrainian and Russian in the LL are not in the 'tourist area' but are situated close to shopping centers and/or commercial/residential avenues/streets, namely with private shops owned by immigrants (we found two Russian shops in Aveiro), or in the oldest avenue of the city (Avenida Dr. Lourenço Peixinho) in mobile panels placed in the sidewalk that belong to money exchange companies<sup>1</sup>.

**TABLE 2** CROSS REFERENCING BETWEEN 2 VARIABLES: IDENTIFIED LANGUAGES AND NUMBER OF LANGUAGES USED IN EACH SIGN (WEBQDA O.9)

	English	Portuguese	Mandarin	French	Spanish
Monolingual	3	0	1	1	0
Bilingual	8	9	1	1	0
Multilingual	7	7	0	4	6

<sup>1</sup> These areas are not contemplated in this exploratory study and are part of a broader PhD research we are conducting, as we mentioned previously.

The reflection about the linguistic diversity in this neighborhood may be examined with the help of other variables, such as the distribution of languages across different areas of activity. Focusing on the data resulting from the cross referencing between area of activity and identified languages in each sign taken into consideration (see Table 3), we notice once again the high predominance of English in every area of activity listed, with major representation in catering and tourism areas. The only case in which other language exceeded English was in Stationary shops, the French with 2 items.

The contents of Table 2 and Table 3 considered the number of references, i.e., the number of elements in each sign and not the number of selected pictures (that is to say that one single picture may have more than one sign).

**TABLE 3** CROSS REFERENCING BETWEEN 2 VARIABLES: AREA OF ACTIVITY AND IDENTIFIED LANGUAGES (WEBQDA 0.9)

	English	Portuguese	Mandarin	French	Spanish
<b>Catering</b>	6	5	2	1	2
<b>Hotels</b>	4	2	0	1	1
<b>Tourism</b>	10	10	0	2	5
<b>Stationary shops</b>	1	1	0	2	0
<b>Education institutions/activities</b>	3	2	0	0	1

There is an equal presence of Mandarin and Spanish in the catering activity. Yet, this does not mean that these languages have a similar emphasis or function or even audiences in the LL because they appear in different types of signs with different purposes: on the one side, the name of the Chinese restaurant in the façade of the an antique Portuguese building with a visual impact due to the lettering, the script and lightning; on the other side, the menus written in Spanish printed on a 21x29,7 cm sheet of paper. This is mainly related to the symbolic and the informative functions of LL (Landry & Bourhis 1997), but also to visual aspects of language like layouts, color, typography and multimodality (Van Leeuwen, 2005, 2006; Kress & Van Leeuwen, 2006; Walsh, 2006).

#### 4. DIRECTIONS FOR FUTURE ANALYSIS

This brief analysis called our attention to the importance of considering several variables within the scheme of analysis and to the relevance of the symbolic/informative functions of language, as we have seen in the case of the Mandarin-Spanish and English. In addition to this aspect, Aveiro's exploratory study also drew our attention to the relevance of other manifestations of LL that circulate in the center of the city and contribute to the composition of its LL, such as printed leaflets, touristic guides or postcards (see Jaworski, 2010, for the analysis of the text-image relation of postcards as creators of 'multilingual tourist landscapes'). That inclusion may unveil a surprising presence of languages other than English, particularly important when characterizing the linguistic diversity of (smaller) cities and the linguistic inputs that touristic demands bring into LL. On this matter we have in mind the major presence of

Spanish in touristic texts that we did not observe by photographing the streets of the «Beira Mar» neighborhood since we did not include these units of analysis in our corpus.

On future analysis, we should as well reconsider the exclusion of Portuguese monolingual signs that we assume in the exploratory study. The inclusion of all languages, counting the prevailing one, allows us to discuss the predominance of foreign languages and the use and presence of Portuguese language, for instance in certain socioeconomic areas; or to analyse the linguistic creativity in company or shop names that combine more than one language. This is quite relevant also to reflect upon the evolution of Portuguese language or others caused by the impact over time of language contact and globalization processes through LL research. The analysis of the results of language contact over time, or the discussion of the linguistic creativity are also relevant because these topics have an educational value and can be explored in classrooms in different school subjects such as Portuguese Language, Foreign Language or Arts.

As for limitations, the pictures we selected to carry out this exploratory analysis represented a small part of the main corpus, providing only a partial panorama of the linguistic diversity present in the LL of Aveiro, even though it helped us to reorganize the methodological options concerning the broader study of this Portuguese city.

When it comes to future challenges on the LL field we agree with Huebner (2009) on his suggestion to move beyond the quantification of 'linguistic artifacts', seeking to achieve a better understanding of the interpretation that inhabitants have about the LL in given place, and this is provided with qualitative data. The importance of local actors/city inhabitants to explain LL and the relevance of their perceptions, preferences and attitudes towards languages in public space has been mentioned in several studies (Malinowski, 2009; Aiestaran, Cenoz & Gorter, 2010; Garvin, 2010; Trumper-Hecht, 2010; Ben Said, 2011). Thus, applying questionnaires or conducting interviews to the local inhabitants provide new possibilities to develop a better understanding of the process of creating LL, of legitimating languages in a public space, of linguistic preferences and attitudes, meaning also the possibility to become aware of the additional meanings that inhabitants/authors put into LL writings. The sociolinguistic area of LL would also benefit from the design of methodological solutions that account for a larger picture of multilingual urban contexts, such as data triangulation.

Backhaus (2006) stated that much remains to be done to improve and give form to the empirical research into written language and, at this point, we can observe that LL is, definitely, contributing to 'expand the scenery' of research on urban multilingualism. The study of LL in urban environments has the potential to explain and understand globalization and language contact consequences over time, as well as to contribute to an urban and human sustainable development project through the recognition of the value that languages have and the importance of displaying languages in public spaces. The assumed relevance of LL studies and the debate around its methodological options or questions is undoubtedly one source of the dynamics of the field, of its increasing complexity and is the confirmation that LL's knowledge benefits from the perspectives of different disciplines.

Finally, we must also draw attention to the emergence of the research on the role of LL in education. There is still a long way to go on the research of the urban LL as a pedagogical context and as a tool able to help innovating teachers' practices since first school years. Introducing LL in the curriculum, would help to develop and improve students' knowledge of their cities in general and of their closest neighborhoods, to raise their awareness and knowledge about languages, to develop their critical thinking about language use in society.

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#### **LEGISLATION**

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