

The spatial construction of civic identities: A study of Manchester's linguistic landscapes

Leonie Gaiser & Yaron Matras

University of Manchester

December 2016



Preface

The following essay provides an overview and analysis of Manchester's linguistic landscapes, carried out as part of the Multilingual Manchester strategic initiative at the University of Manchester. The work draws on data collected through LinguaSnapp®, the world's very first smartphone app designed to capture linguistic landscapes, first released in October 2015. All examples images discussed in this paper can be accessed online via the LinguaSnapp® portal (<http://www.linguasnapp.manchester.ac.uk>). A selection of quantitative datasets on which this paper relies is accessible in table format via <http://mlm.humanities.manchester.ac.uk/wp-content/uploads/2016/12/DataAppendix.pdf>

Contents

1	Introduction
2	Exploring linguistic landscapes: From signs to space
3	LinguaSnapp: A new tool to document linguistic landscapes
4	The setting: Manchester's multilingualism
5	LL distribution across space
6	LL distribution across sector and outlet
7	The symbolic construction of place: Spatial clusters in Manchester's LL
8	Spatial demarcation: Manchester's Chinatown
9	Inwards looking spatial demarcation: Manchester's Hebrew signage
10	Emblems of cosmopolitan identity
11	Multi-site networking and Interdiscursive Dialogicality
12	Top-down multilingual signage
13	Discussion

References

1 Introduction

With its long history of migration, Manchester (UK) has become a dynamic multilingual city that can be considered as ‘superdiverse’ (Vertovec 2007). Immigrants to Manchester have come from a variety of countries and the city is now home to over 150 languages originating from South and East Asia, West and East Africa, the Middle East and Central and Eastern Europe. Its culturally and linguistically diverse population has contributed to shaping the city’s visual appearance: Linguistic landscapes (LL) – written language use on public and private signs, posters, or notes – are one of the most obvious reflections of the dynamics of globalised societies, constantly shaped and re-shaped by a variety of social, cultural, economic, and legal factors. As Blommaert (2013) points out, the material manifestation of language in the public space can help explain the complex structures of superdiverse sociolinguistic environments.

Language signage, in interaction with other semiotic resources, has been argued to play a central role in the organisation and regulation of place (Stroud & Jegels 2013; Blommaert 2013). The use of heritage languages in Manchester’s LL marks the presence of the respective language communities and is a way of expressing ownership of place (Leeman & Modan 2009; Jaworski 2014). However, language use on signage illustrates that a one-on-one mapping of ‘language’ and ‘community’ is not always possible. As Vertovec (2012: 303f.) has pointed out, the complexity associated with superdiversity poses challenges to well-established categorisations (cf. Arnaut et al. 2016: 7; Van der Aa & Blommaert 2015; Blommaert 2013). While oral language is increasingly recognised to be volatile and understood in terms of repertoires rather than fixed ‘languages’ or ‘language systems’ (Blommaert & Backus 2011; Matras 2009; see also García & Wei 2014 and Heller 2007 on *translanguaging*), it is often taken for granted that written language is fixed, constant, and non-permeable.

This paper shows how the permeability of language boundaries and residents’ holistic appreciation of their language repertoires find their expression in the LL: language use in a globalised urban environment, even in the written form, questions the idea of ‘languages’ as discrete entities, as users’ creative compositions may result in ambiguity of language choice. Moreover, the LL illustrates how languages are combined across community boundaries, which may call into question traditional notions of ‘community’. Historically, communities have been defined on the basis of shared heritage and regarded as rather “cohesive and self-conscious social group[s]” Li (1994: 50f.). However, the complex reality of urban multilingualism requires a more dynamic understanding of ‘community’, defined through interaction, bonds, and multi-site networking. This complexity of language practices in private and public spheres shifts the locus of language ‘identity’ from the national to the civic level (cf. Matras & Robertson 2015; Heller 2011).

Nazroo (2001) and Harries (2016) discuss the challenges of defining and understanding ethnic groups and identity in relation to data collection and analysis: traditional ethnic classifications based on uniform, generalising categories cannot do justice to the variability and heterogeneity of identity in the contemporary context of globalised, late modern nations (cf. also Nazroo et al. 2008; Panico & Nazroo 2011;

Nazroo & Karlsen 2003). Differences between academic, policy, and self-categorisation further complicate the picture, as difficulties in defining 'community' pose potential challenges to policy. Wong (2015) and Wong et al. (2015a, 2015b) illustrate the relevance of spatial scales to policy planning. They develop techniques to map spatial needs and assess government responses to spatial challenges. Spatial reference frameworks and digital technologies help facilitate 'planning-as-learning' in order to achieve better spatial policy coordination (cf. Rae and Wong, 2012; Wong et al, 2008). These works highlight the importance of tools that can help map various aspects of ethnicity and community-specific cultural practices.

In 2015, the University of Manchester's Multilingual Manchester project developed *LinguaSnapp*, a mobile app to record and map LL. The *LinguaSnapp* map is publicly accessible and allows users to identify the geographical distribution and clustering of languages in the survey area. This facilitates exploration of the complex inter-relations between signs, people, and space¹ and offers an opportunity to re-think the categorisations that rest on these complex relations. Drawing on the example of Manchester, this paper is the first to use *LinguaSnapp* to investigate the forms and functions of multilingualism in LL. Our key research question is: What can we learn from Manchester's LL about the city's multilingual profile? To answer this overarching question, we will address several sub-questions: Which languages are present in Manchester's linguistic landscapes, and what is their spatial distribution across the city? How does language use in Manchester's linguistic landscapes help organise space and the relations between the people inhabiting it? How does Manchester's bottom-up LL compare to language use on top-down signs, in a city where language practices are generally decentralised? What can be learned from multilingual LL about the emergence of new civic identities, and what are the implications for categorisations in planning and policy?

Our aim is thus to explore how Manchester's multilingual landscapes relate to wider phenomena of individual and collective identity as well as to the social construction and organisation of space, increasing our understanding of multilingualism and superdiversity more widely. In a superdiverse environment such as Manchester, where a variety of actors use their diverse linguistic repertoires to shape and re-shape the city's linguistic landscapes, space itself becomes a complex and dynamic semiotic resource that indexes interests, relationships, identities, and belonging. The present paper is intended to contribute to the methodological and theoretical framework of LL research as well as to our general understanding of identity and space.

This study pioneers a combination of quantitative and qualitative methods in LL research, triangulating the *LinguaSnapp* corpus of photographed multilingual signs with quantitative data sets on language (School Census 2015; GP interpreter requests 2014/2015) and face-to-face, qualitative interviews. Adding a discourse analyt-

¹ Throughout this paper, the term *sign* will be used as an umbrella term to refer to the different types of LL-texts (e.g. billboards, metal signs, printed posters, handwritten notes), unless otherwise stated.

ic, context-sensitive perspective to interpreting language signs, this framework allows for a holistic understanding of language use in the LL.

In the following section we offer a review of the development of LL research. We discuss the interrelatedness of language, identity and space and how these affect each other in the ‘meaning making’ process. We then go on to outline previous approaches to the spatial mapping of languages, before introducing LinguaSnapp. We describe the study’s setting through an overview of Manchester’s migration history and its current linguistic profile. We then embark on an evaluation of the dataset of images, descriptors, and accompanying observations. We begin by offering a quantitative overview of the presence and distribution of languages in the city’s LL. We then explore how space is defined through the clustering of languages in the LL, active spatial demarcation, reaching out to other communities, and spatial networking. In the concluding remarks we return to our research questions and draw conclusions about the contribution that the LinguaSnapp tool can make to help re-shape the study of linguistic landscapes and multilingualism in Manchester and beyond.

2 Exploring linguistic landscapes: From signs to space

Early LL research: Quantifying ‘languages’ in the LL

Early LL research was dominated by large-scale surveys that relied on counting and ranking written ‘languages’ and scripts according to a limited number of quantifiable categories (Rosenbaum et al. 1977; Wenzel 1996). Backhaus (2007) offers a comprehensive overview of multilingual signs in Tokyo, correlating the LL with demographics. Likewise, Huebner (2006) focuses on the quantitative representation of languages in the LL. Landry & Bourhis (1997) distinguish between *informational* and *symbolic* functions of the LL, a distinction that has influenced much subsequent research (c.f. Fairclough 2001; Curtin 2009; Cook 2013). Accordingly, the LL is believed to mark the geographical territory inhabited by a given language community and inform in-group and out-group members about which languages are used for communication (Landry & Bourhis 1997: 25). LL’s also have *symbolic functions*, with the written presence or absence of languages reflecting and influencing the relative status of the respective communities, thus mirroring their “ethnolinguistic vitality” (1997: 27).

Others have focused on the factors that influence language choice, while keeping a quantitative focus. Spolsky & Cooper (1991) attribute language choice to the sign-writer’s language skills, the presumed readers’ skills, and symbolic identification with the languages used. Ben-Rafael et al. (2006) draw on sociological theories to explain the structuration of the LL. They use ideas from Boudon (1990), Goffman (1981) and Bourdieu (1983) to help explain language choice on signage: Rational considera-

tions are balanced with the aim to present a certain image of self and with power relations between dominant and subordinate groups in a given space. Ben-Rafael et al. (2006) distinguish between *top-down* signs, issued by public bodies such as governmental or municipal agencies, and *bottom-up* signs, put up by private individuals and commercial LL-actors. Likewise, Backhaus (2007) and Huebner (2006) address the question of authorship and distinguish between 'official' and 'non-official' signs.

However, as Blommaert (2016: 1f.) points out, these early LL studies were "marked by a synchronic, static and quantitative approach to hypostatized 'language'", which cannot account for the complexities and dynamics of the LL. Early research tends not to dwell on the local meanings of individual signs and their relation to the wider sociolinguistic context. Focusing on textual analysis, most studies fail to take into account sign writers' motivations behind language choice and sign readers' perceptions. Such approaches have therefore been argued to have only "limited value for the study of multilingualism" (Gorter 2013: 6).

From linguistic to semiotic landscapes

A significant step in LL research has been to consider the functional arrangement of languages on individual multilingual signs. In her reader-oriented typology of multilingual LL-texts, Reh (2004) identifies four types of relationship between the languages used in a sign, and message content: *duplicating*, *fragmentary*, *overlapping* and *complementary multilingual writing* (c.f. Backhaus 2007). Her framework shifts attention to whether equivalent or different types of information are given in different languages, which can offer indications regarding language purpose.

Another area of interest has been the commodification of language in the LL. Leeman & Modan (2010) and Lou (2010; 2016) show how the use of Chinese in Washington DC's Chinatown targets mainly non-Chinese readers, serving as a cultural symbol and marker of authenticity rather than a means of communication.

LL research has increasingly been shaped by a more contextualised and interpretive perspective that is sensitive to the various levels of meaning potentially derived from LL-signs. Jaworski & Thurlow (2010) introduce the term *semiotic landscapes* to capture the notion that written language is only *one* among several semiotic resources, interacting with other modalities such as nonverbal communication and architecture. Their analysis of visual features of LL-items draws on Kress & Van Leeuwen's (2006) *Grammar of Visual Design*, which illustrates how colours, the relative dominance of languages, and pictures or icons contribute to creating meaning. Likewise, Pennycook (2009) and Sebba (2012) emphasise multimodal ways of 'meaning making'. Cook (2015), Stroud & Mpendukana (2009) and Blommaert (2013) point out that the materiality of an LL-item, i.e. its texture and the resources used to create the sign, affect interpretation. Metal signs, for instance, suggest solidity and permanence; home-printed and handwritten, "amateurish" (Cook 2013: 71) notes imply immediacy and impermanence.

Much of the research on semiotic landscapes has been inspired by *geosemiotics*, “the study of the social meaning of the material placement of signs and discourses and of our actions in the material world” (Scollon & Scollon 2003: 2). It is argued that a sign’s physical and temporal situatedness play an integral role in meaning making. In *nexus analysis*, signs and their production and reception are understood as a *nexus of practice* (Scollon & Scollon 2004). LL-items are sites of social action, where various ‘cycles of discourse’ are interconnected: *Interaction order* refers to the notion that discourse organises relationships between social actors (cf. Goffman 1981). *Visual Semiotics* relates to the multimodal nature of meaning. *Place semiotics* refers to the notion that the meanings generated by discourse derive directly from its emplacement. Finally, *historical body* relates to the life experiences, identities, and goals of individual social actors (Scollon & Scollon 2004: 19). As Scollon & Scollon point out, an understanding of the various semiotic systems “relies crucially on an ethnographic understanding of the meanings of these systems within specific communities of practice” (2003: 160).

From semiotic to social landscapes

Blommaert (2013) calls for Ethnographic Linguistic Landscape Analysis (ELLA) as a way of applying the principles of geosemiotics and nexus analysis. Longitudinal ethnographic immersion in his Antwerp neighbourhood helps Blommaert (2013) relate language use in the LL to broader social and societal developments. Noting that superdiversity brings with it an inherent layer of complexity, he foregrounds the non-linear and emergent forms of ‘meaning making’ that affect the shaping and interpretation of the LL. Blommaert (2013) argues that the dynamics of the LL can be understood only if we attend to this complexity and observe the present LL as highly contextualised. Accordingly, the social functions of language signs can be analysed by looking at three “axes”. First, signs point towards their conditions of origins: They offer indications about the broader sociolinguistic, semiotic and sociological conditions under which they have been designed and deployed. Second, signs point forwards to their potential uptake, indicating selected audiences and intended effects. Third, signs point ‘sideways’ through their (non-random) synchronic and syntagmatic emplacement (Blommaert 2013: 44). This relates to Scollon & Scollon’s (2003) *principle of dialogicality*, according to which

all signs operate in aggregate. There is a double indexicality with respect to the meaning attached to the sign by its placement and its interaction with other signs. (2003: 205)

Patterns of interaction and relationships are organised on different *scale levels*, which characterise polycentric sociolinguistic systems. The seemingly chaotic LL then turns out to have a particular, though complex and changing, order (Blommaert 2013: 107). The neighbourhood’s multi-layered and flexible landscapes form a “complex of infrastructures for superdiversity held together by conviviality”, which follow the socio-demographic dynamics of the area (Blommaert 2012: 23).

In order to understand the complexities of the LL, the perspectives of sign-producers and the perceptions of sign-receivers must be taken into account (Malinowski 2009, 2015; Blommaert 2012; Lou 2016). There has been an increasing involvement of sign-writers and readers in LL research through interviews (Vandenbroucke 2015; Zeevi & Dubiner 2016; Blackwood 2015), questionnaires (Barni & Bagna 2010; Cenoz & Gorter 2006), and participant observation (Malinowski 2009). Stroud & Jegels (2013: 1) use “narrated walking” to explore how informants “actively construct the significance of local place as they navigate and move through space” (cf. Garvin 2010). The linguistic landscape has thereby been turned into a “social landscape” (Blommaert & Maly 2014: 3), features of which can be read through an investigation of signs that considers its producers and receivers, its historical context, and the space in which signs are situated.

Interactions between language, space and place

Notions of *space* have become a central concern in LL research (Barni & Verdovelli 2012; Vandenbroucke 2015; Amos 2016). As Blommaert (2013) notes, “communication always takes place in a spatial arena, [which] imposes its own rules, possibilities and restrictions on communication” (2013: 32). Already Landry & Bourhis (1997) acknowledge the direct link between the meaning of signs and their emplacement; however, they regard place as fixed and static. Ben-Rafael et al. (2006) note that the LL does not just index a reality, but contributes to creating space. The “discursive turn in LL studies” (Moriarty 2014: 459), marked by the move away from a strictly linguistic towards a more semiotic focus, has further shaped the understanding of semiotic landscapes as discursively constructed space (Jaworski & Thurlow 2010). Cresswell (2004) and Blommaert & Maly (2014), among others, understand place not as a mere geographically defined area but as symbolic representation of social, cultural and political values. Similarly, Pietikäinen et al. 2011 regard place as both a condition for, and a result of, social and linguistic practice, as language and space affect each other in creating meaning.

The understanding of space as on-going construction can be traced back to Lefebvre (1991), who proposes that space is produced through spatial practices (everyday practices that people carry out in a given area), representations of space (perceptions and evaluations of space), and spaces of representation (conceptions of space as lived experience). While Backhaus (2005: 105) regards LLs as the “linguistic outward appearance of a place”, Lefebvre’s (1991) notion of space implies that physical space is never really an objective space, as it is always conceived by and for people (cf. Leeman & Modan 2009; Shohamy & Waksman 2009). The LL reflects how space is imagined, represented, and enacted by its inhabitants (Blommaert 2010: 63).

Tuan’s (1977) distinction between ‘place’ and the more abstract ‘space’ can be applied to LL research. “What often begins as undifferentiated space becomes place as we [...] endow it with value” (Tuan 1977: 6). As Scollon & Scollon (2003) and Hult (2014) note, language signs represent social practices that give space meaning and turn

it into place. Place is replete with traces of human activity, interactions, relations and histories, thus becoming a “genuine actor in semiotic processes” (Blommaert 2013: 37).

As Yigezu & Blackwood (2016: 141) point out, language is “an authentic and widely accepted defining characteristic of identity”. Blackwood, Lanza and Woldemariam (2016) have devoted an entire volume to studies that look at the negotiation and contestation of identities in and through LL, exploring how a sense of belonging is constructed in a place (Blackwood et al. 2016: xvii). The volume brings together papers on political and economic dimensions of identity constructions in the LL, protest and contestation of identities, the negotiation of regional and national identities, collective identities, and the construction of identity from a comparative perspective. Stroud (2016) addresses questions of ‘belonging’ and ‘community’ in the complex multicultural setting of South Africa. Yigezu & Blackwood emphasise the “potential for the LL to contribute to the creation of a distinct identity for an ethnic group who speak a particular language” (Yigezu & Blackwood 2016: 131). Williams & Lanza (2016: 233) note that LL research can contribute to our understanding of how ethnic groups live alongside one another negotiating their linguistic identities through various semiotic means in the public sphere. By putting up signs, LL-actors mark their presence and authority over parts of a shared space. As Huebner (2006) notes, “linguistic tokens serve to delineate the geographical and social boundaries of [...] neighbourhoods” (2006: 32). As shown in Blackwood, Lanza & Woldemariam (2016), language use in the LL is a way of negotiating ownership and declaring power over space (cf. Leeman & Modan 2009; Jaworski 2014).

The simultaneous processes of sharing space and demarcating space have implications for sign-writers’ and readers’ identities. On the one hand, as Ben-Rafael (2009) has argued, the use of one’s ‘own’ language can be seen as the writers’ “presentation of self” and expression of collective identity, presenting oneself as belonging to a group. Additionally, the demarcating effect of signs in public space defines reader identities. “Signs cut up a larger space into smaller ones, [...] where particular rules and codes operate in relation to specific audiences” (Blommaert 2013: 43). LL texts have a certain scope and operate within that scope, including, and at the same time excluding, parts of the audience (cf. Amos 2016). Cook (2013) distinguishes between “community” multilingualism, which targets in-group members whose language skills allow access to the content of LL-items, and “atmospheric” multilingualism, which refers to signs that are directed at wider audiences. Reaching out across what is typically perceived as ‘community boundaries’ by using multilingual signage offers insights into LL-actors’ identities. “[L]inguistic landscape indexes the construction of new, multiple, emerging and/or imagined group identities” (Rubdy 2015: 6). Matras & Robertson (2015) show how the combination of multiple languages on LL-items serves to construct and reinforce a new multilingual civic identity. This civic identity, which relates to the way in which individuals position themselves in the world and towards the local community, is defined by the sharing of space and expresses an inclusive stance towards the diverse surrounds. Similarly, Blackwood & Tufi (2010: 199) note that the LL constitutes, creates and promotes both an individual and a collective

space. Blackwood et al. (2016: xviii) point out that movements of people may lead to the forging of new identities, which finds its expression in the LL.

Mapping languages in the LL

The consideration of space has added an important dimension to LL research and methodology. Barni & Bagna (2006, 2015) create digital maps to analyse the spatial distribution of languages across survey areas. They use digital cameras to take photos of multilingual signs and code the data on site, using a handheld computer equipped with specifically designed software (*MapGeoling*). MapGeoling allows users to link images to their geographical location and to add analytical descriptors according to a predefined framework (Barni & Bagna 2009). Similarly, the research project “Metropolenzeichen” uses geo-referencing methods to explore the distribution of languages in the LL (Ziegler 2013). The study involves the analysis of geo-coded photos stored alongside a range of analytical descriptors. With similar aims, Dixon (2015) has manually plotted the distribution of language signs in Buffalo, NY, on an electronic map.² Likewise, the project “Linguistic Landscapes of Beirut” uses digital maps to situate multilingual texts in urban space.³ The public is invited to take pictures of LL-items in Beirut, which are later added to maps. Malinowski (2006) has created an online forum for language learners to discuss LL-texts, where students can upload their own geo-referenced images. The initiative “Map of the Urban Linguistic Landscape” encourages readers to upload LL pictures, yet it does not provide a publicly accessible map.⁴

While early studies relied on fieldnotes (Rosenbaum et al. 1977) and analogue cameras to document LLs (Calvet 1990; Spolsky & Cooper 1991), researchers from the 1990s onwards have used digital cameras to facilitate collecting larger quantities of pictures. Gorter (2006: 83f.) foresees the potential for further technological advancement for the study of LLs: “Cell phone cameras do add another dimension and will probably change the ways people take pictures and share them, wirelessly, with others”. Emphasising that the relation between LLs and space requires further exploration (Lou 2016; Amos 2016), researchers have called for the development of methods that facilitate detailed surveys of greater research areas (Soukup 2016). Blackwood (2015) notes that it

is challenging to the point of being unfeasible to survey an entire city or town; of course, technological advances might well mean that, in the coming years, it will be possible to undertake an authoritative, comprehensive study of all the public space in a given city. (2015: 41)

² The map is available at

<https://www.google.com/maps/d/viewer?mid=1KZesWwOqjCxu1fsLNL20D-9J6Oc>

³ Information on the project and the LL maps are available at <http://llb.djwrisley.com>

⁴ Information on the project is available at <https://murbll.wordpress.com>

The methods applied to analyse LLs have been increasingly qualitative and have relied on smaller datasets (cf. Zabrodskaia & Milani 2014; Pietikäinen et al. 2011). Blackwood (2015) argues that, although quantitative approaches to LL have recently been viewed negatively, a combined quantitative-qualitative methodology is useful. Blommaert & Maly (2014) call for an approach in which LL-items are given greater attention “both individually (signs are multimodal and display important qualitative typological differences) and in combination with each other (the *landscape*, in other words)” (2014: 3).

In 2015, the University of Manchester’s Multilingual Manchester (MLM) project developed *LinguaSnapp* (LinguaSnapp 2015), a smartphone application that can be used to capture, store and analyse LLs. LinguaSnapp’s mapping element allows users to identify the spatial distribution and clustering of languages in a given territory. In this way, it has the potential to close some of the gaps addressed above.

3 **LinguaSnapp: A new tool to document linguistic landscapes**

Purpose and scope

Linguasnapp (2015) is the world’s very first mobile app designed to record and map LL. It was developed by the University of Manchester’s Multilingual Manchester project and IT Services, and released in October 2015 for free download from Apple AppStore and Google Play Store. Smartphone users can use the app to take photos of LL-signs and insert analytical descriptors. The framework combines Reh’s (2004) theory of information arrangement with Scollon & Scollon’s geosemiotic (2003) and Blommaert’s (2013) ethnographic-historical approach. For each photographed LL-item, users can add information regarding language use, content, and context. These analytical descriptors accompany the image alongside automatically generated GPS-coordinates that capture the location coordinates where the photo was taken. For Greater Manchester, LinguaSnapp also records the name of the district, matching GPS data to a pre-defined list. The app also records the date and time the image was created. Once uploaded onto the LinguaSnapp online database (LinguaSnapp 2016a), photo entries undergo moderation by the Multilingual Manchester research team. Editors review analytical data for accuracy and may add or amend analytical descriptors and translations to ensure consistency and completeness. Registered researchers and students can bulk download image metadata and analytical data for analysis.

After approval, the images become publicly accessible on the LinguaSnapp map (LinguaSnapp 2016b). This interactive map visualises the geographical distribution of signs. Users can filter searches by selected descriptors and thereby identify patterns of language use. Signs and analytical data can be viewed individually in their geographical location, or as part of a pattern of spatial distribution of selected features.

LinguaSnapp integrates the Google Streetview function, which enables users to view images in their street-level environment, i.e. in the surrounding landscape.

To meet copyright requirements related to the publication of images, LinguaSnapp users are asked to agree to LinguaSnapp terms and conditions upon registration. Users consent to waiving the copyright over images in favour of the University of Manchester. As LinguaSnapp operates on a non-commercial basis, photographing written texts in the public space does not (at least in the UK) pose any substantial problems to data collection (UK Copyright Act 1988; cf. Androutsopoulos 2014). LinguaSnapp photos must be approved by authorised researchers before they are made publicly visible, ensuring that intellectual property rights are not violated and ethical standards are met, and protecting LinguaSnapp from misuse.

LinguaSnapp adds an innovative crowd-sourcing element to data collection and facilitates the compilation of large LL-corpora that reach across cities, countries and continents. Engaging members of the public in data collection and sharing data with other researchers reduces the “dependence on the researchers’ own pictures” (Pavlenko 2010: 133). The mapping of LLs goes beyond pre-determined survey areas. Including ‘ordinary’ sign readers in documenting the LL allows for the possibility to discover unexpected correlations and outliers. This lessens the impact of subjectivity in data collection and addresses the difficulties of imposing the researcher’s perspective on data, addressed at a recent LL Workshop (LL8, April 2016; cf. Blommaert 2012).

Apart from use of the format of the mobile smartphone app, LinguaSnapp’s originality and innovation lie in its reliance on analytical descriptors. These offer new opportunities to combine quantitative with qualitative analyses. They also offer the public an opportunity to engage not just with the images themselves and their locations, but also with their semiotic features and functional distribution. In this way, the resource also has the potential to serve as an instrument for surveying commercial and marketing trends as well as for policy planning. In early 2016, just a few months after its launch, LinguaSnapp was added to Manchester City Council’s official online Statistics and Intelligence Hub⁵, where it features as the only dynamic resource that undergoes constant updates. It is thus a good example not just of the policy impact of research, but also of the way in which a higher education institution can serve as a link between teaching and learning, engagement of the wider public, and policy. It serves to raise awareness of language diversity not just through the symbolic act of collecting images, but by offering users an opportunity, and indeed prompting them to reflect on the purpose and function of multilingual signage and thereby on the way in which language diversity shapes the city’s infrastructure, trade, communications, culture and skills. This is particularly purposeful in a setting such as Manchester – as in countless other globalised cities – where there is no centralised regulation of language use in public signage, unlike cities or countries that are officially multilingual, and where instead language policy is localised, de-centralised, and responsive, operating exclusively at the micro-level (see Matras & Robertson 2015).

⁵http://www.manchester.gov.uk/info/200088/statistics_and_census/5702/manchester_statistics_in_the_intelligence_hub/9; last accessed 18 November 2016

Monolingual English signs remained outside the scope of the present study, the rationale being that in a setting such as Manchester, where the majority population consists of monolingual English speakers and there is no official policy on language use, monolingual English signs as the ‘default’ occurrence. The LinguaSnapp tool can, of course, equally be used to quantify the relations among all languages in a given environment, should this be a question that researchers might wish to pursue, or indeed to capture the use of different styles of English in relation to spatial, temporal and the analytical dimensions covered by the tool. For the purposes of the present study, however, we avoided such wholesale coverage and devoted our attention exclusively to those signs that include a language or languages other than English.

The typical multilingual sign in the Manchester setting is a bottom-up initiative within the commercial private sector to reach out to local audiences for the marketing of products and services, or else, within the non-for-profit voluntary sector, to flag the services offered by cultural and religious institutions. Uses vary even within these domains, with non-English signs covering a continuum ranging from the symbolic inclusion of just company, product or service labels to the full-fledged communicative text that provides detailed information or instruction. Non-English signs in the non-commercial private sector usually flag affiliation to a local cultural community, or else they represent ad hoc initiatives by individuals who initiate isolated commercial transactions such as advertising one-off sales or informal services. Top-down multilingual signage initiated by public institutions usually carries information on access and use of services, instructions pertaining to safety procedures, or labels of public landmarks.

Analytical descriptors

LinguaSnapp’s analytical descriptors are designed to capture this complexity of semi-otic functions and patterns of intended outreach through language choices on signs. Figures 1 to 4 show images of the main pages of the smartphone app, including the main menu (Figure 1) and the pages that allow users to enter analytical descriptors related to ‘Language’ (Figure 2), ‘Context’ (Figure 3), and ‘Analysis’ (Figure 4).

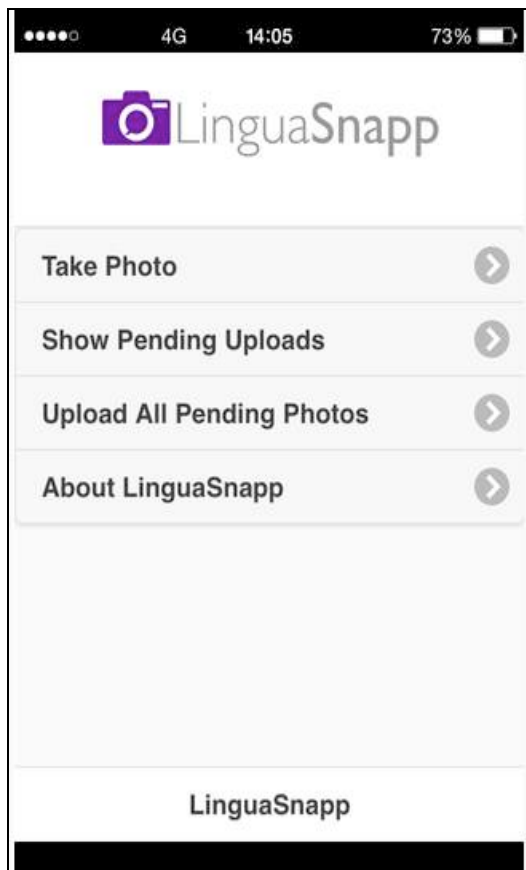


Figure 1. LinguaSnapp mobile app main menu

Cancel Save Upload Delete

Language Context Analysis

Title
Restaurant welcome sign

No. of Languages No. of Alphabets
4 2

Your current Languages and Translations for this photo
Please enter more in the form below

Language:Arabic Alphabet:Persian-Arabic Translation>Welcome	X
Language:English Alphabet:Roman (Latin) Translation>Welcome	X
Language:Somali Alphabet:Roman (Latin) Translation>Welcome	X

Language Alphabet
Urdu Persian-Ara...

Translation:
Welcome

Add Your Language and/or Translation

Figure 2. LinguaSnapp mobile app 'Language' menu

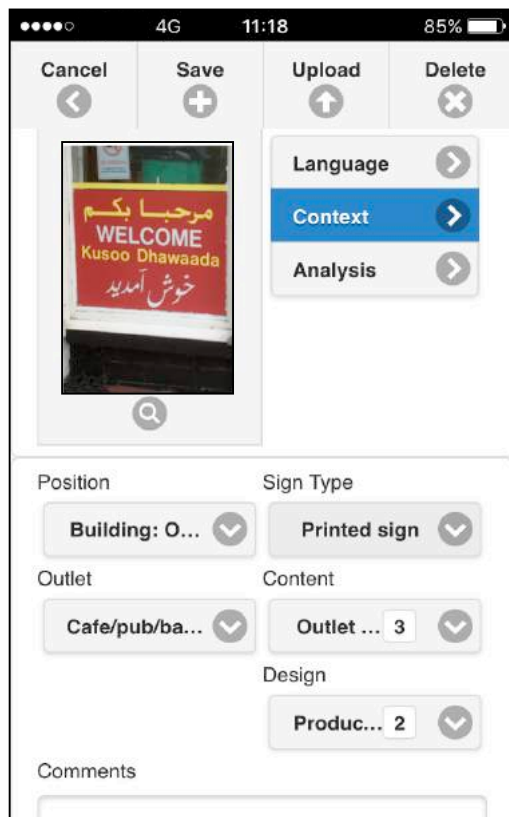


Figure 3. LinguaSnapp mobile app 'Context' menu

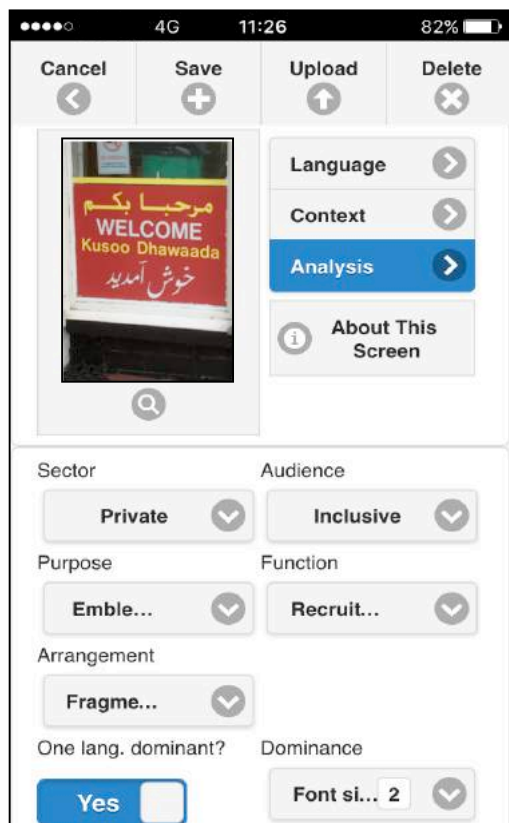


Figure 4. LinguaSnapp mobile app 'Analysis' menu

After taking an image, the user assigns it a name and is then able to save it or to immediately upload it onto the online database, where it is accessible to registered editors with its GPS coordinates, time, and LinguaSnapp username identity of the person who took the image. Image names facilitate quick identification of images as discrete units, though for fine-tuned quantitative evaluation the unique combination of username, GPS, and time ensures that each image has a unique set of identifiers. Analytical descriptors can be entered, saved, and edited on the mobile device before uploading the image, or on the administrative platform once the image has been uploaded onto the server.

The technical setup does not require descriptors to be entered in any particular order, but the category that appears at the top of the user menu identifies the number of languages and alphabets, and the languages and alphabets themselves. As with other descriptors, the user can select a language from the menu, or type in a language name in the field ‘Other’. Accompanying the language name is a text field in which a translation can be entered, if necessary separately for each language text that appears on the sign.

The next category of descriptors targets the **Context**. The user is asked to identify the **Position** of the sign (Building: Outdoors; Building: Indoors; Market stall; Signpost/billboard/sandwichboard; Mobile: external – car, taxi, bus; Doorbell; Other – lamppost, wall, etc.), and the Sign Type (Printed poster; Printed sign; Printed leaflet; Printed label; Handwritten note (unique); Handwritten leaflet/poster (photography); Electronic sign; Graffiti). The **Outlet** in which the sign is displayed is identified through a long list of options (Residential; Restaurant; Fast food/take away; Bakery/butcher; General food; Cafe/pub/bar/shisha bar; Community centre/cultural centre; Religious institution; Hairdresser/beauty salon; Clothing; PC/electronics; Travel agent/cargo agent; Doctor/dentist/clinic; Government Office; Street sign; Public transport vehicle (bus, train, tram); Airport; School; University; Other). This is followed by a general descriptor of the sign’s **Content**, which captures the communicative or informational value of the text (Outlet name/institution name/personal name; Location name/street name; Outlet information (opening times etc.); Product information; Service information; Safety/health instruction; Religious/political message; Personal message; Other non-commercial information). The final contextual information addresses the sign’s **Design** or visual features. Here, a fixed set of options appears (Icon/logo; Product image/Service image).

The final set of descriptors is referred to on the app as the **Analysis**, as it pertains to an interpretation of the distribution, semiotic function and purpose of the sign as well as the relationship among languages on the multilingual sign, where relevant. Categories include the **Sector** of the outlet displaying the message (public; private; voluntary). ‘Public sector’ signs are texts authored by or on behalf of government or public agencies and institutions. Examples include public municipal signs, traffic signs and National Health Service (NHS) information material. ‘Private sector’ (or bottom-up) signs are texts authored and put up by businesses and private individuals, ranging from commercial shop signs to handwritten notes. ‘Voluntary sector’ signs are texts put up by non-for-profit organisations such as religious or cultural institutions. For

illustration, see examples of a 'Public sector' sign (Figure 5), a 'Private sector' sign (Figure 6), and a 'Voluntary sector' sign (Figure 7).



Figure 5. 'Public sector' sign: Urdu-Arabic (advising not to feed pigeons)



Figure 6. 'Private sector' sign: Persian (bakery)

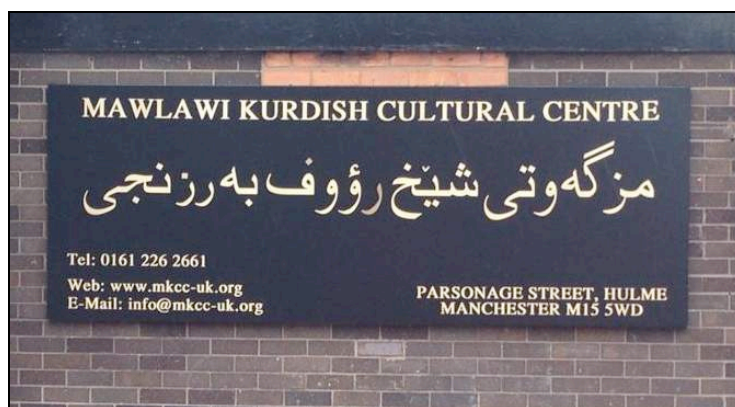


Figure 7. ‘Voluntary sector’ sign: Sorani Kurdish, English

Further Analysis descriptors capture the role that language choice plays in **Audience Selection** (exclusive; inclusive), the **Language Purpose** (communicative; emblematic), the **Message Function** (landmark; recruitment; public statement; muted), the **Arrangement of Languages** (duplicating; fragmentary; overlapping; complementary), and any indication of the **Visual Dominance** of one language over another on the sign (position; font size; colour; quantity; other).

‘Audience selection’ prompts an interpretation of whether the intention behind the choice of language was to make a message accessible to a wider audience (‘inclusive’), or whether language choice is intended to single out a particular target audience (‘exclusive’). The bilingual Bengali-English sign in Figure 8, for example, reaches out to a wider audience, while the message contained in the monolingual sign in Figure 9 specifically targets readers of Urdu.



Figure 8. Audience-‘inclusive’ sign: Bengali, English



Figure 9. Audience-‘exclusive’ sign: Urdu (‘Pakistan Kulfi’)

‘Language purpose’ relates to whether language choice in a given sign is motivated by a practical need to convey content or information (‘Communicative’), or whether it serves primarily to attract emotional identification (‘Emblematic’) (cf. Matras & Robertson 2015). For the sign in Figure 10, for example, it can be assumed that Arabic and English were chosen to reach the intended readership. The choice of Hebrew in Figure 11, on the other hand, is less likely intended to accommodate readers who would otherwise not be able to understand the sign, as it targets a population that is normally fluent in English. The translation of the full content of the English text flags the availability in principle of Hebrew as a community heritage language, and thus it serves as an emblem of culture as much as a practical instrument to convey information.



Figure 10. ‘Communicative’ language choice: Arabic, English



Figure 11. ‘Emblematic’ language choice: Hebrew, English

‘Message function’ refers to the functions that the text performs (cf. Blommaert 2013: 53). Signs that identify their location in relation to history, tradition and customs have ‘Landmark’ function. The language used “does not point towards a particular community of language users, but points to a ritual, religious tradition” (Blommaert 2013: 53f.). The use of Armenian on the bilingual sign in Figure 12 does not reflect the current presence of a sizeable group of Armenian-speakers in Manchester; rather, it indicates the (religious) importance of the language, which plays an integral role in the liturgy of the Armenian Church.



Figure 12. ‘Landmark’ function: English, Armenian

Signs that have ‘Recruitment’ functions invite readers to engage with the sign-writers. Examples include shop signs and posters advertising events. The sign in Figure 13 announces an event that targets a particular audience, and, through language choice, it addresses a particular readership.



Figure 13. 'Recruitment' function: Urdu, English (annual religious gathering)

'Public statements' seek to influence the readers' opinion. The banner in Figure 14 calls on readers to vote for its author in the upcoming Students' Union elections; language names (representing degree courses) are symbolic gestures.



Figure 14. 'Public statement' function: English, Russian, French, German, Italian, Japanese, Chinese, Portuguese, Spanish, Kurdish

‘Muted signs’ are those that only indirectly function as readable signs, and were not placed to relate to the specific location in which they are found, for instance waste disposal bags that carry texts (Blommaert 2013: 54f.). Figure 15 shows an example of such ‘accidental sign’, whose “inscriptions are only indirectly an instrument for communication” (Blommaert 2013: 54).



Figure 15. ‘Muted’ sign, French

We follow Reh’s (2004) categorisation of the functional arrangement of languages. ‘Duplicating’ multilingual writing repeats the same content in two or more languages (see Figure 16). According to Reh (2004: 28), such usage indicates that multiple languages are spoken in the target audience, but that individuals are not necessarily competent in all of these languages. Note however that in practice some of these languages may be used primarily for symbolic or identity-constituting functions.



Figure 16. 'Duplicating' multilingual writing: English, Chinese

In 'Fragmentary' multilingual writing, exhaustive information is given only in one language, but selected parts are translated. Figure 17 shows an example of 'fragmentary writing': English is used to convey information on the outlet name, services offered, and contact details, while Urdu only provides the outlet name.



Figure 17. 'Fragmentary' multilingual writing: Urdu, English

In 'Overlapping' multilingual texts, the languages offer partially the same information but each also conveys additional content. For instance, the message conveyed in Kurdish in Figure 18 does not include the information that the service is fully

insured, which is offered in English. On the other hand, the Kurdish text advertises the company's 'fair prices', which is not conveyed in English.



Figure 18. 'Overlapping' multilingual writing: English, Sorani Kurdish ("ready to deliver your car to desired destination for a fair price")

Finally, 'Complementary' multilingual texts use different languages for different aspects of the message content. Such signs presuppose individual multilingualism among the target readership, as a complete understanding of the overall message is possible only for readers who are proficient in all languages used. For example, knowledge of both Urdu and English is required to understand the message shown in Figure 19. Readers with no knowledge of Urdu will not understand that the advertised flat is for rent rather than for sale, and that it is available only to married couples or women.

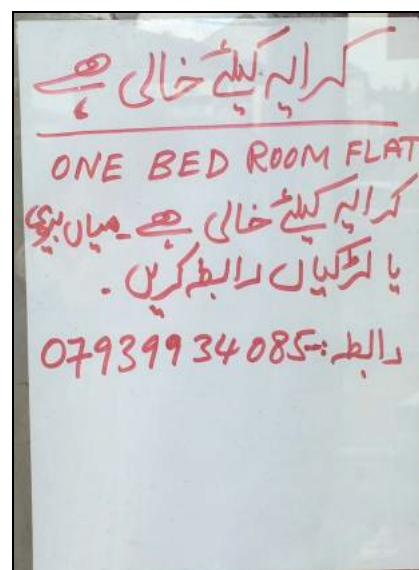


Figure 19. 'Complementary writing': Urdu, English ("available for rent, husband and wife or girls")

Most LinguaSnapp descriptors offer a choice of variables. Since the lists are not exhaustive, categories can be added during the analysis. In cases where categories are not mutually exclusive, the software allows for multiple selections. In order to ensure the accuracy of language identification and translation, editors consult native speakers of the languages. A Comments box is used to add any notes that might become relevant in the analysis, e.g. linguistic features perceived as non-standard (cf. Blommaert 2013), as well as comments from observations and conversations with local actors or stakeholders such as shop owners and customers, passers-by, and so on.

Language identification and categorisation

Quantitative analyses inherently require categorisations, which may pose methodological difficulties (Weber & Horner 2012; Blommaert 2013). The very notion of identifying and counting written 'languages' presupposes that these are definable as concrete, enumerable entities. However, multilingual individuals' linguistic repertoires do not consist of clearly definable systems, but are highly complex (Matras 2009; Blommaert & Backus 2011). This is observable in the LL in phenomena such as code-mixing (Huebner 2006). Moreover, the relationship between languages and scripts is not always fixed and it is not always possible to unambiguously identify languages due to linguistic bivalency, i.e. "simultaneous membership of an element in more than one 'linguistic system'" (Woolard 1999: 6). This is exemplified for instance by the text shown in Figure 20, which embeds much of what could be classified as Urdu or Persian or Pashto.



Figure 20. Linguistic bivalency: English, Urdu or Persian or Pashto

Figure 21 shows a private welcome note written by a child to welcome family members. Such notes are common on external (street-level) display on private doors in the Orthodox Jewish neighbourhoods of North Manchester. This is connected with the high degree of mobility of community members among worldwide congregations that maintain tight links. The sign features the Hebrew greeting 'Welcome' (in the plural). Around it are personal notes in Yiddish, which in turn incorporate formulaic expressions in Hebrew. Thus, the enclosed message on the bottom right conveys the message (Hebrew insertions in Caps): "Dear Daddy, Shmili, and Ari, THANK GOD

you have returned SAFELY”; the signature on the left says: “Made by Hannah and the entire family”. Obviously the work of a child, we can regard the Hebrew expressions as embedded into the child’s repertoire of spoken and written Yiddish.



Figure 21. Private welcome note: Yiddish, Hebrew

Figure 22 confronts us with yet another classificatory dilemma, in that here two parallel texts are displayed, both in Chinese language and in Chinese script, yet the first (on the left) in traditional and the second (on the right) in simplified characters. While the message may be intended to serve a communicative purpose (streamlining newly arrived international students), in effect its function can be regarded as largely emblematic, since all international students who have acquired a student visa will have been admitted to a local course, for which knowledge of English at academic level is a pre-requisite. The separation of scripts apparently targets students from Hong Kong (where traditional characters are used) and those from Mainland China (where simplified characters are used). Due to the rarity of occurrence of parallel Chinese character sets, LinguaSnapp does not distinguish traditional from simplified Chinese characters on its default menu, though the distinction can of course be introduced under Comments. The example thus shows how even core categorisations can require ad hoc and contextual clarification and modification.



Figure 22. Manchester airport banner: traditional and simplified Chinese

Difficulties of ‘indeterminacy’ have been discussed in previous LL research, and criticism has been voiced regarding methods that rely on generalist, pre-selected categories (cf. Pavlenko 2009; Amos 2016). The apparent pitfalls of the need to take decisions on key categorisation proves to be an analytical advantage in *LinguaSnapp*: The digital approach puts a spotlight on the limitations of categorisations that frame multilingual repertoires necessarily as combinations of discrete ‘languages’. Instead, *LinguaSnapp* allows us to identify boundaries and break them down in the analysis. The extensive range of analytic descriptors, the high level of granularity, and the possibility to add variables help avoid simplification. Allowing for multiple selection flags the possibility of multiple category membership.

In this paper we use concepts such as ‘languages’ and ‘communities’, yet we take a critical approach to rigid categorisation and are conscious of the fuzziness of boundaries. Where language identification is ambiguous, the local context and conversations with sign writers play a decisive role in categorisation. For example, the bi-valent ‘welcome’ on the signage of a church was coded as ‘Urdu’ rather than ‘Persian’, as it also advertises a Sunday service in Urdu (Figure 23).



Figure 23. Bivalent ‘welcome’: English, Urdu or Persian

Hindi/Urdu phrases in Roman script, which are common on film adverts (Figure 24), were coded as ‘Urdu’, while the rendering of English legal and administrative terminology such as “immigration”, “property” or “personal injury” in Urdu script (Persian-Arabic script adapted for Urdu) (Figure 25) was also coded as ‘Urdu’.



Figure 24. Hindi or Urdu in Roman script: English, Hindi/Urdu



Figure 25. English terminology in Urdu script: English, Urdu

At the same time, in non-English texts, English symbols for measurement or currency units (Figure 26) were considered in context to be universal and not counted as ‘English’.

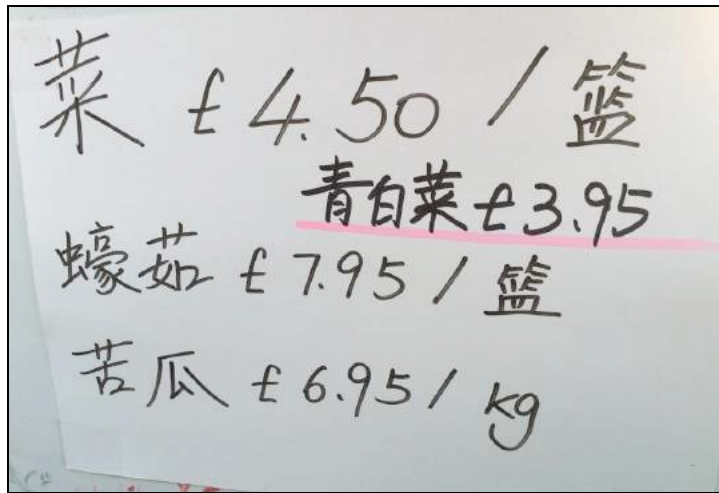


Figure 26. English measurements or currency units on Chinese sign

4 The setting: Manchester's multilingualism

Manchester's migrant communities

Since its emergence as an industrial metropolis in the late 18th century, Manchester has been famous for its pioneering role in new developments in engineering and manufacturing and increasing business opportunities. It has also been a centre of immigration for people from countries around the world (Werbner 1990: 11). Manchester's population began to expand in the early 19th century, as the city's prominence in the world cotton trade attracted an international workforce from Ireland, Scotland, Wales and further afield (cf. Mellor 1984: 9; 1985). Throughout the 19th century, significant communities of Jewish, Italian, German, Greek, Armenian and Middle Eastern background arrived in the city to find work or open businesses. These merchants, tailors, traders, and workers came to play major role in Manchester's industrial growth. However, by the 1950s Manchester was a deindustrialising city with a declining population. The collapse of the city's textile industry led to plant closures, and industrial employment declined by 43% (Werbner 1990: 12). Yet, thanks to work opportunities and the prospect of support from settled communities, the city has continued to attract new generations of migrant workers, refugees, professionals and international students. After the economic depression, South and East Asian immigrants moved into manufacturing, wholesaling, and distribution primarily in the food and garment sectors (Werbner 1990: 13). The earlier decline of manufacturing led to a regeneration effort, and Manchester has gradually shifted towards a service-based economy.

During the decade between 2001 and 2011, the expansion of the city's higher education and service sectors resulted in the largest population growth rate of any city in England except London (Matras & Robertson 2015: 297). The increased employment mobility of people from Eastern European countries following the expansion of the European Union in 2004 and 2007, has encouraged Polish, Czech, Romanian and other migrants to come to Manchester. Manchester also hosts communities of refugees who have escaped conflict zones in places such as Vietnam, former Yugoslavia, West and East Africa, and the Middle East, as well as populations from former Crown Colonies such as Hong Kong.

The first **Jewish** families came to Manchester in the 1780s, settling in the "old town" on the northern edges of the city centre in Shudehill and Long Millgate, the area around what is now Manchester Cathedral (JCR 2016; Elazar 1999). Manchester's Jewish community grew rapidly, and by 1865 there were around 5000 Jews in the city (Elazar 1999). Intensified persecution in Eastern Europe led to a further growth of the city's Jewish population between 1883 and 1905 (Bullen 2015: 3; Vaughan & Penn 2005). These migrants were joined by traders and merchants from Central Europe and North Africa (Elazar 1999), and the city's Jewish community became one of the largest and most important in the UK (Englander 1994: 247). By the mid-19th century, a middle-class Jewish population had established their settlements in the inner suburbs of Manchester (Williams 1985: 268). The expansion of East European immigra-

tion led to the emergence of the district of Red Bank, an area north of the city centre, where a poorer, less skilled Jewish population settled (Williams 1985). The pattern of Jewish mobility within Manchester is characterised by a northwards move towards the districts of Salford and Bury, with Jews moving to the areas of Strangeways, Cheetham Hill and Crumpsall. By the early 20th century, the southern parts of Cheetham had a large Jewish population, and there were nine synagogues (Brownbill 1911: 259ff.). The Jewish settlement later expanded further northwards towards Broughton, Prestwich and Whitefield (Vaughan & Penn 2005). A second Jewish population settled south of the city centre, where further places of worship were established. To this day, Greater Manchester hosts the UK's largest Yiddish speaking community outside London, concentrated especially in Salford and Bury (Matras & Robertson 2015).

The first **Greeks** arrived in the city in 1828 and settled around Cheetham Hill Road, where they also assembled for their religious services (Chatziioannou 2009: 51). Manchester's economic growth also attracted **Armenian** immigrants, who set up their businesses in the city from the 1830s onwards (HTAC 2016). Manchester was thus home to the first Armenian community in the UK. As the number of Armenian businesses increased and the community grew, funds were raised to build the present Holy Trinity Armenian Church. Opened in 1870 in today's Chorlton-on-Medlock area, it was the first Armenian church built and consecrated in Western Europe (HTAC 2016).

Muslims from eastern **Punjab and northern India** arrived in Manchester from the late 1920s (Werbner 1990: 17). There was a significant increase in **Pakistani** migrants from the late 1950s; they opened up businesses or came to Manchester to study. Pakistani settlers who arrived in the early 1960s came from all over western Punjab as well as Karachi and Mirpur. They settled primarily in the Chorlton-on-Medlock area around Oxford Road (Werbner 1990: 23). Panjabi-speaking Sikhs were concentrated west of Oxford Road, which is also where a number of Sikh Gurdwara temples can be found; Punjabi Muslims settled east of Oxford Road. With increasing immigration, Pakistanis spread southwards to new neighbourhoods such as Victoria Park. Moss Side and Rusholme became home to a **West Indian** (Caribbean) population. In the late 1950s, a City Corporation embarked on a large-scale "clearance programme" (Werbner 1990: 27f.), aiming to "clear" main residential clusters in Hulme, Greenheys, Chorlton-on-Medlock, and later also parts of Moss side and Rusholme within the following decade. This led to a gradual 'fan movement' southwards, as one area after another was demolished. From the late 1960s, groups of migrants moved through Rusholme and Fallowfield to Ladybarn, Withington and Didsbury (Werbner 1990: 27). Pakistani-owned outlets moved from the University area around Oxford Road and Upper Brook Street into Rusholme, where also more and more Pakistani-owned restaurants and other outlets started to open. Rusholme became a commercial centre, serving migrants throughout Greater Manchester (Werbner 1990: 36). The areas of Longsight and Levenshulme also saw increasing numbers of Pakistani migrants, who were joined by other Asian businessmen and professionals as well as significant numbers of East African migrants, including speakers of Amharic, Tigrinya and Swahili. By 1970, West Longsight and the neighbouring areas of Victoria Park

“became the heart” of the Pakistani immigrant enclave (Werbner 1990: 28, 30), and the 1981 Census reports a general rise in the number of Asian households throughout the city and suburbs (Werbner 1990: 30). In response to successive waves of immigration, the Pakistani settlement gradually shifted outwards into the city’s suburbs (Werbner 1990: 48). The improvement in economic circumstances of more settled, established migrants resulted in further dispersal. The prospering of clothing and wholesale businesses in Cheetham Hill and along Bury New Road led significant numbers of Pakistani migrants to move into these north Manchester neighbourhoods (Werbner 1990: 37).

Manchester’s cotton industry also attracted **Arab** merchants, who arrived from the late 18th century onwards to establish their businesses in the city (Halliday 1991: 161). By the end of the 19th century, the number of Arab trading houses in Manchester had increased significantly (MCC 2016). Middle Eastern seamen first settled near the docks in Salford, but moved to the Moss Side and Rusholme area after the First World War (Youth Development Trust 1967: 6). Manchester’s first mosque was established in Victoria Park in the late 1940s by a group of seventy Muslim businessmen and students from a number of countries including, Pakistan, Iraq, Egypt and India (Scantlebury 1995: 428; cf. Seddon 2012). After the Second World War, Manchester witnessed a further and continuing growth of the Arab community, including migrants who came as foreign students from states such as Libya and Egypt, as well as political refugees and asylum seekers following conflict in the Middle-East. As Seddon (2012: 16f.) points out, the “visible presence of these newly-settled and emerging Arab communities is witnessed by the phenomenon of what is being called the Arabization of Manchester’s famous ‘Curry Mile’”. This area, originally famous for its South Asian restaurants and takeaway outlets, has increasingly seen the opening of shisha cafés and Middle-Eastern eateries (cf. BBC 2009).

The first **Chinese** immigrants arrived in Manchester through port cities like Liverpool, Bristol and London in the late 19th and early 20th century (Spencer 1997: 5). A larger wave of Chinese immigrants arrived in Manchester in the 1950s and 1960s, fleeing the unstable political situation and unemployment in Hong Kong (Li 1994; Archives Plus 2016). These settlers, now considered the first or older generation of the Chinese community in Manchester, were mostly Hakka speakers. A new wave of Chinese immigrants came to Greater Manchester from the 1970s on, joining family members and friends who had already settled in the city. Among this group of migrants were large numbers of Cantonese speakers. Manchester has since then continued to attract Chinese immigrants. When sovereignty over Hong Kong and then Macau was handed back to the Chinese authorities in 1997 and 1999, new settlers arrived. More recently, the city has seen growing numbers of immigrants seeking work opportunities. In addition, partnerships between UK and Chinese Universities have led to a rise in numbers of overseas students, some of whom stay after their studies. This group of new immigrants consists mainly of Mandarin speakers, originating from Mainland China rather than Hong Kong.

Speakers of Chinese are dispersed around the city, yet two clusters can be identified: The first is Chinatown, which is a commercial area in the city centre that

serves the local and regional Chinese community, international students from China, as well as non-Chinese Manchester residents. Manchester's Chinatown is the second largest Chinatown in the UK and third largest in Europe (Christiansen 2003: 202). The emergence of Chinatown dates back to the early 20th century when the first Chinese settlers, mostly Hakka speakers, came from the New Territories of Hong Kong to Manchester. Chinese businesses began to open in this area with waves of immigration during the 1950s. Manchester's first Chinese restaurant was opened in 1948 in the area that is now known as Chinatown (BBC 2004), and more restaurants began to emerge during the 1950s with a wave of Chinese immigrants. From the 1980s, Chinese settlers started to open other types of businesses to serve the needs of the growing community, such as banks, accounting firms, legal firms, bakeries, supermarkets, printing companies, hair salons and travel agencies. The Ming Dynasty Imperial Arch, around which Chinatown is centred today, was erected in 1987 "as a gift from Manchester City Council to the Chinese community as a symbolic gesture of goodwill" (Wan 2012). More recently, a second pocket of Chinese speakers in the city has been emerging on the northern edge of the city centre in Ancoats. This 'new Chinatown' has developed its distinctive Chinese character only over the past two-three decades, and rather unofficially. The opening of a large Chinese supermarket on Oldham Road in the mid-1980s has, through its Chinese-inspired architecture, has given the area a Chinese flair and attracted Chinese customers and businesses. Next to the supermarket, the HSBC bank opened a branch in the early 2000s targeting specifically the city's and the region's Chinese community (Butt 2004): it has a Cantonese-speaking business banking manager, bilingual staff, bilingual signage, and printed material in Chinese. The opening of the main branch of a Chinese community centre in 2010 (Wai Yin 2016) and a Chinese church have been further pull-factors for Chinese residents and businesses to settle in the area.

Among Eastern European migrants to Manchester, **Polish** settlers make up the largest group. Polish settlers came to the city after World War II and set up a Polish church in the early 1960s in Moss Side, which is still run by and for the city's Polish community (Polish Church 2016). Hungarian settlers came to Manchester following the Hungarian crisis of 1956. The growth of Manchester's Polish community over the past decade and the sizeable presence of migrants from other Eastern European countries have followed these countries' EU accession in 2004 and 2007. Eastern Europeans have since continued to arrive in search of work. Manchester residents with Eastern European background are widely distributed across the city.

Present-day multilingualism

Our analysis of LinguaSnapp data was informed by a consideration of other available datasets on language, as well as on observations and interviews in targeted locations. We conducted semi-structured on-site interviews with LL-actors during data collection. We spoke to sales staff and members of community institutions about their signage, with questions pertaining to language choice, attitudes and preferences. More in-

depth, longitudinal contact with a number of Manchester's language communities (in particular speakers of Arabic, Chinese, Polish, Romani, Kurdish, and Yiddish, as well as the Panjabi-speaking Sikh community) offered further insights into community language practices. Our work is also informed by several earlier pieces of research into local multilingual practices, including our investigation of language diversity in Manchester schools, of language provisions in Manchester's supplementary schools, and of language provisions in access to health care.⁶

Various datasets provide insights into patterns of language use in Manchester, and when triangulated, they can help construct an overall picture at least of the presence of language communities in particular areas, and of language needs and institutional responses to such needs (cf. Matras & Robertson 2015). The School Census lists 'first languages' of school children by school and district and is based on data entered annually by school staff. Below, we refer to data from January 2015. The National Census (2011) contains self-reported data on respondents' 'main language'. Both School and National Census come with a number of caveats, as the terms first/main language are ambiguous and ignore users' complex linguistic repertoires and the possibility of multiple home languages. Data on GP interpreter requests represents the numbers of interpreter requests at Manchester's GP surgeries, which mirrors language needs. The data are collected by Manchester Integrated Care Gateway and broken down by individual GP practices and language. We refer below to data collected from 01/03/2014 to 28/02/2015. One must bear in mind that the different data sets reflect different needs and offer different perspectives. While the National Census (2011) is based on participants' self-identification, School Census (2015) data depends on the perception of others, i.e. assumptions of the pupils' first or home language that are not necessarily based on the child's active use of the language, literacy skills, or even knowledge at all. When giving consideration to data on interpreter use in GP environments, one must remember that these data capture instances where people need to access medical services, and as such they are not representative of the language needs or abilities (i.e. preference for use of the home language or lack of proficiency in English) of the language group as a whole. Interpreter request data reflect a dependency of groups that are less proficient in English as an additional language: In general, we expect that interpreter requests represent the needs primarily of an elderly population and of new arrivals. We expect that GP and hospital interpreter requests reflect some combination of older populations and recent arrivals.

In the 2011 National Census, 16.6% of Manchester's adult population declared that their 'main language' was a language other than English, compared to only 8% of the general population of England and Wales. According to the self-reported Census (2011) data, more than 25% of Manchester's population were born outside the UK, with 15.8% having lived in the city for less than ten years. The School Census (2015) suggests that around 37% of Manchester's schoolchildren speak languages other than English as their 'first language'.

⁶ See <http://mlm.humanities.manchester.ac.uk/publications/>

Urdu is the most frequently reported ‘main’ or ‘first language’ in Manchester after English (School Census 2015; Census 2011). The Pakistani community has had the highest growth rate of any single language community in Manchester, followed by various African groups (MLM 2013: 1). Arabic is reported to be the second largest community language in the city (see Figures 27 and 28). Manchester is home to the largest Libyan community outside of Libya (Seddon 2012: 17; BBC 2011); Arabic is also spoken in the city by Syrians, Yemenis and Iraqi Arabs as well as, as a second language, by Kurds and many Somalis. Manchester’s Arabic-speaking population is on the rise, which is partly attributable to the recent arrival of refugees from Syria, Iraq and Kuwait (Gaiser & Matras 2016). The large presence of newly arrived Arabic speakers is also suggested by the requests for Arabic interpretation at Manchester’s GP practices (see Figure 29). Manchester accommodates the third largest Chinese population in the UK (Lo 2008: 14). Polish, Persian and Panjabi are also among the city’s largest community languages. Other languages spoken by large communities in the city include Somali, Kurdish Yoruba, Pashto, Gujarati, French, Portuguese, Spanish, Greek, and Yiddish.

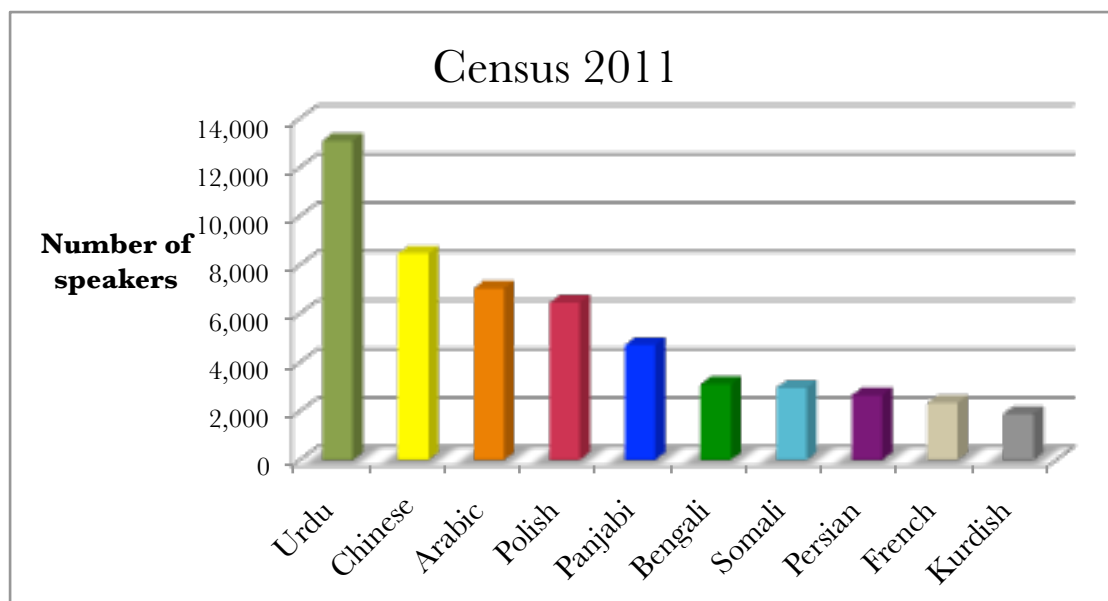


Figure 27. Top self-reported ‘main languages’, Census 2011⁷

⁷ The Census (2011) distinguishes between ‘Mandarin’, ‘Cantonese’ and ‘All other Chinese’. For consistency and to facilitate comparison across datasets, we have grouped these varieties together under ‘Chinese’ in Figure 27.

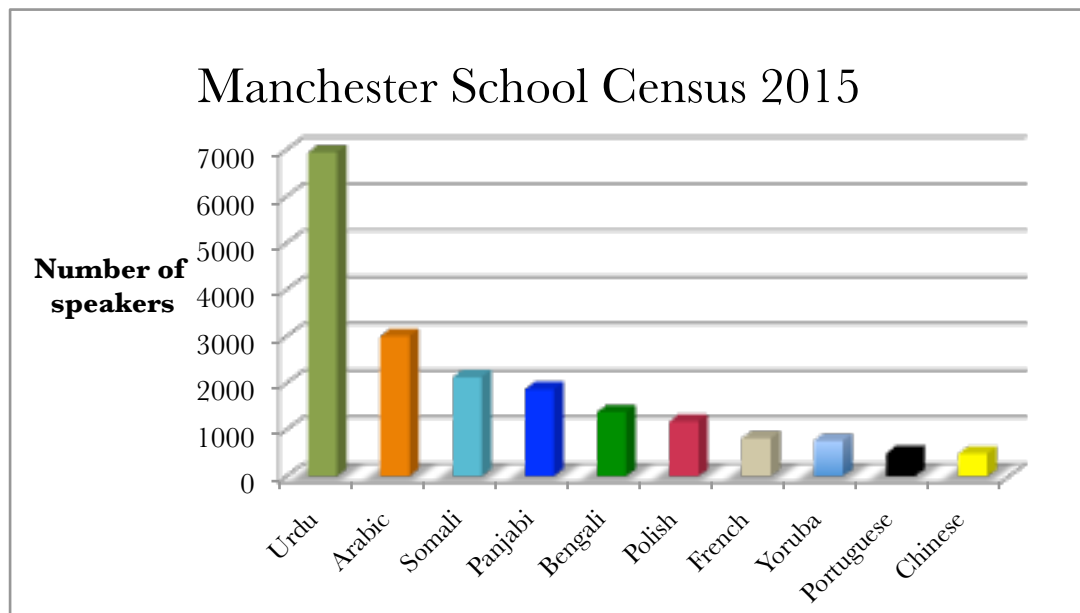


Figure 28. Top First Languages of Manchester pupils, School Census 2015

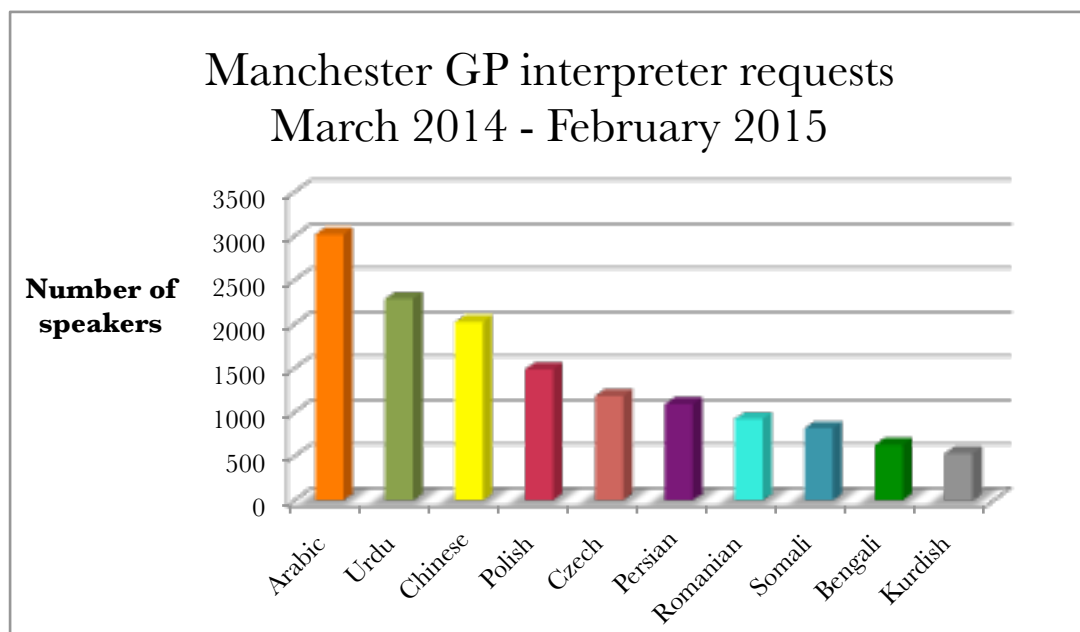


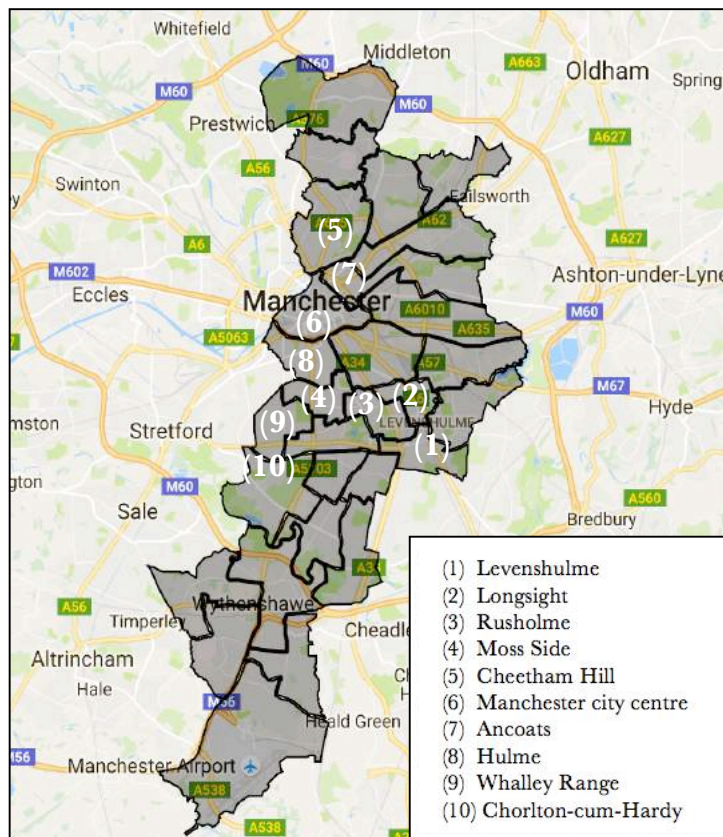
Figure 29. Top languages requested for interpretation at Manchester GP surgeries between March 2014 and February 2015⁸

⁸ The dataset on Manchester GP interpreter requests (March 2014 – February 2015) distinguishes between ‘Mandarin’ and ‘Cantonese’. For consistency and to facilitate comparison across datasets, we have grouped these varieties together under ‘Chinese’ in Figure 29.

As a result of distinct settlement histories, Manchester's communities differ in demographics. Manchester's Urdu, Panjabi, Arabic, Gujarati, Vietnamese, Hakka, and Cantonese speaking communities are well established in the city. With the exception of Urdu and Arabic, which are also the languages of more recent arrivals, these languages tend to be spoken by elderly residents. By contrast, Pashto, Kurdish, Romanian, Spanish, Hungarian, and Mandarin are spoken primarily by more recent arrivals, and by and large by younger residents. We can assign an intermediate position to Somali and Polish, speakers of which have been settling in Manchester over the past 15-20 years. There is a growing young population of second and third generation immigrants in Manchester who have received formal education in the UK and are thus proficient in English, yet continue to maintain their community language skills

Spatial distribution and clustering of languages

While data collection was not limited to any particular area of the city, LLs of interest naturally tend to cluster in commercial areas of zones that have highly diverse populations (cf. Ben-Rafael et al. 2006, Huebner 2006). In Manchester these include, in particular, Levenshulme, Longsight, Rusholme, Moss Side, Cheetham Hill and the Chinatown area in Manchester's city centre, as well as Ancoats, Hulme, Whalley Range, and Chorlton-cum-Hardy (Figure 30).



Cheetham Hill, which has historically attracted foreign business owners and workers, is today one of the most diverse areas of Manchester: more than 50 different languages are recorded in census data for Cheetham Hill. According to the School Census (2015), more than 68% of the neighbourhood's schoolchildren speak a 'first language' other than English, and on the Census (2011) more than 34% of the population declared a language other than English as their 'main language'. The principal languages declared as 'main language' in the 2011 Census in this area were Urdu, Arabic, and Panjabi, which, along with Polish, also show the highest number of pupils with 'first language' in the 2015 School Census. Demand for interpreters in the area's GP surgeries in 2014-2015 was, on the other hand, negligible, with just a few requests mainly for Arabic, Czech and Panjabi.

In Rusholme, almost 75% of the area's school children are reported to speak a language other than English as their 'first language'. According to the self-reported Census (2011) data, just under 30% of Rusholme's adult population report a language other than English to be their 'main language'. Urdu and Bengali are among the top languages in this area, followed by Arabic, Somali, and Panjabi. In 2014-15, a high level of requests for interpretation was recorded at local GP practices especially for Arabic, mirroring the influx of new arrivals, many of whom are refugees, to the neighbourhood, and there was also high demand for interpretation for Urdu and Somali. Other languages present in the area include Kurdish, Persian, Pashto, and Bravanese (usually recorded in official datasets as 'Swahili', and spoken by immigrants from Somalia).

In the 2011 Census for Moss Side, 35% of the neighbourhood's population declared a language other than English to be their 'main language'. Almost 70% of school children attending schools in Moss Side are reported to speak a 'first language' other than English (School Census 2015). Moss Side shows a strong presence of Somali speakers. According to the School Census (2015), 23% (560) of school children in the area speak Somali as their first language – 48% of all children whose first language is not English. Arabic is the second largest language in the area, followed by Urdu. Other recorded languages include Chinese and Polish (mainly among adults, with few recorded school pupils having these as first language), Kurdish, and Swahili (representing Bravanese spoken by residents of Somali background).

In Longsight, almost 80% of the area's school children are reported to speak a language other than English as their 'first language'. According to the 2011 Census, 37.7% of the neighbourhood's population declare a language other than English to be their 'main language'. For schools in Levenshulme, the School Census (2015) suggests that 56.28% of school children speak a 'first language' other than English. Almost 19% of the area's population declared a language other than English to be their 'main language' (Census 2011). The areas of Longsight and Levenshulme both show high concentrations of speakers of Urdu, Bengali, and Panjabi. The growing number of GP interpreter requests for Arabic (in Longsight) and Romanian (in Levenshulme) testify to recent arrivals of new populations, as do records from GP practices and local schools of speakers of Eastern European languages including Czech, Polish and Hungarian.

5 LL distribution across space

The linguistic diversity of Manchester's LL differs across the city. Certain areas are characterised by a very high density of multilingual signage, whereas others show only scattered use of languages other than English (Figure 31).⁹ A high density of non-English signage is found in Chinatown, where Chinese dominates the LL. As one moves further away from the city centre, other community languages begin to appear more frequently. There is a high density of multilingual signage in neighbourhoods that have a highly diverse population, specifically Rusholme, Levenshulme, Longsight and Moss Side in South Manchester, and Cheetham Hill and Broughton in North Manchester.



Figure 31. All LinguaSnapp entries for Greater Manchester (July 2016)

By and large, language choice on signs reflects the residential patterns of Manchester's migrant communities. Urdu is distributed across the city's LL, yet highly concentrated in the multilingual landscapes of Cheetham Hill, Longsight and Levenshulme (Figure 32). This mirrors the geographical distribution of Urdu speakers as reported in other language datasets.

⁹ Figure 31, and all maps below, show entries recorded by 10/07/2016. See <http://www.linguasnapp.manchester.ac.uk> for the most recent version of the map.

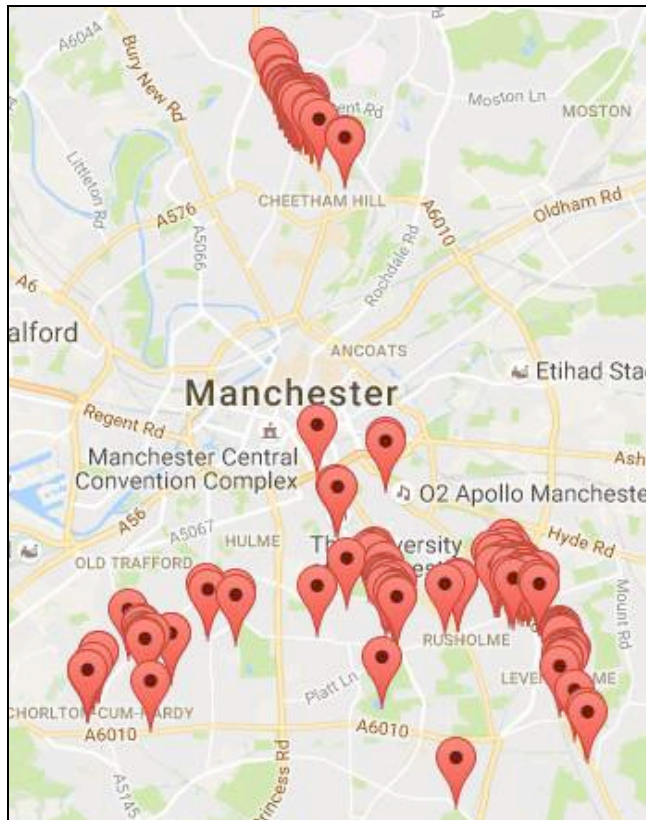


Figure 32. Distribution of Urdu signs in Manchester

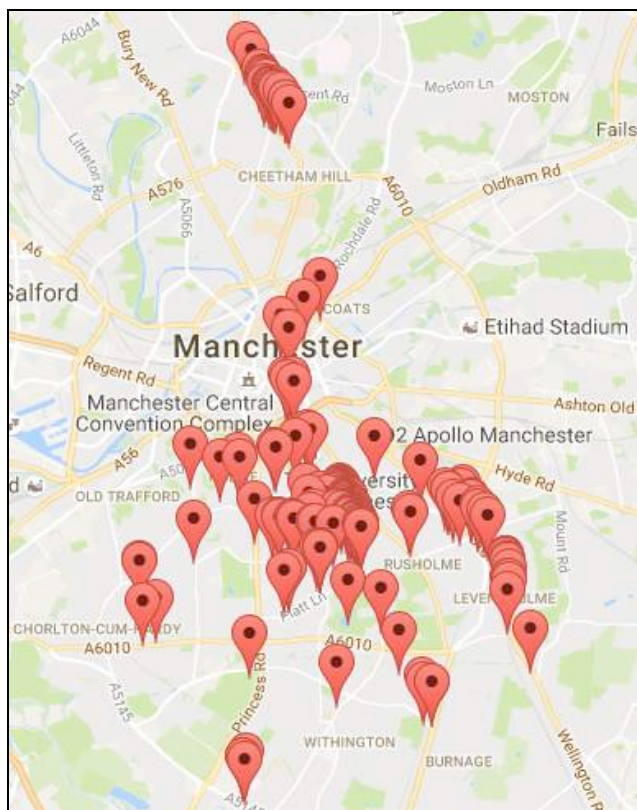


Figure 33. Distribution of Arabic in Manchester

Arabic is visible across Manchester (Figure 33), again reflecting the distribution of speakers. To some extent, the written presence of Arabic spatially correlates with clusters of Urdu in the LLs of Levenshulme, Longsight and Cheetham Hill, which reflects that these groups cohabit certain areas (MLM 2013). Arabic is clearly predominant in Rusholme (Figures 34; 35). A comparison with earlier research suggests an increasing use of Arabic in this area's LL, again indicating a growing presence of speakers in Manchester (Gaiser 2014; Ryan 2011).

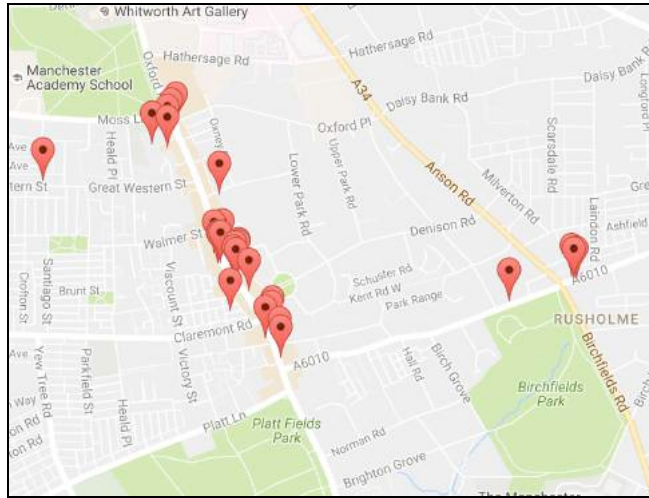


Figure 34. Urdu signs in the Rusholme area

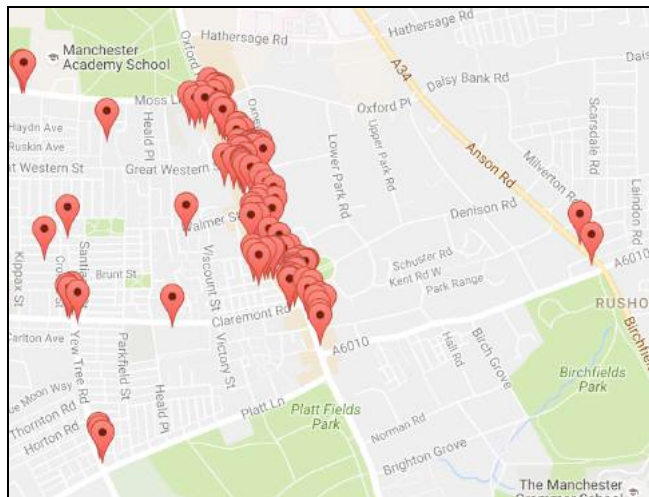


Figure 35. Arabic signs in the Rusholme area

Bengali correlates with Urdu and Arabic in the LLs of Longsight, Levenshulme, and Rusholme, reflecting the spatial distribution of Bengali speakers. Polish signs are distributed across the city, again mirroring settlement patterns (Figure 36). Polish clusters around Polish shops in Cheetham Hill and a Polish church in Moss Side. It often co-occurs with other Eastern European languages (Lithuanian, Czech, Hungarian), attributable to cohabitation and shared demand for similar products.

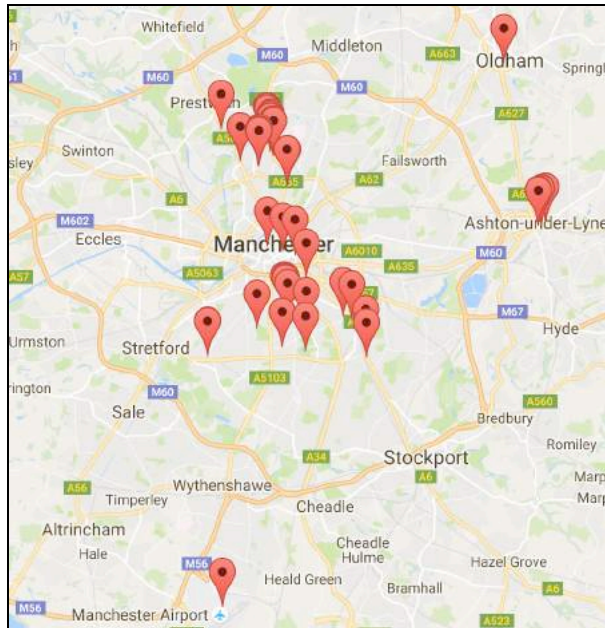


Figure 36. Distribution of Polish signs in Manchester's LL

Hebrew is used on the façades of, inside, and surrounding Jewish religious institutions in North Manchester, and to a lesser extent in South Manchester (see Figure 37). This reflects the community's settlement history. Likewise, the geographical distribution of Armenian in Chorlton-on-Medlock and of Greek in Broughton, both on the façades of religious institutions, reflects old settlement patterns of these communities.

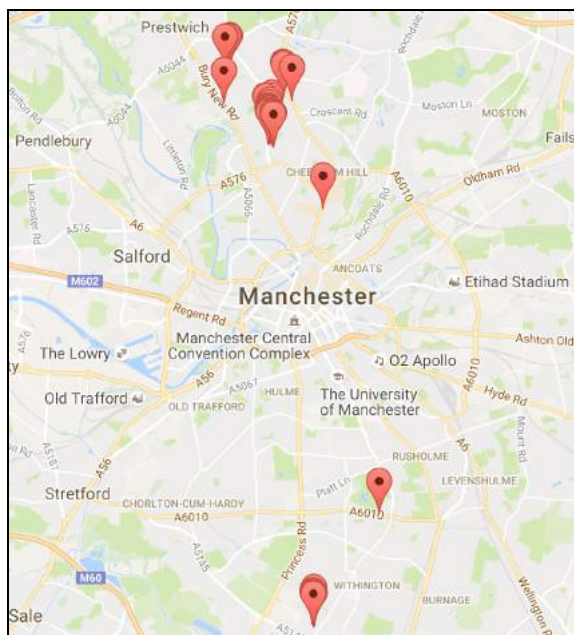


Figure 37. Distribution of Hebrew signs in Manchester's LL

Chinese writing marks the LL across the city, but shows irregular patterns of spatial distribution (Figure 38).

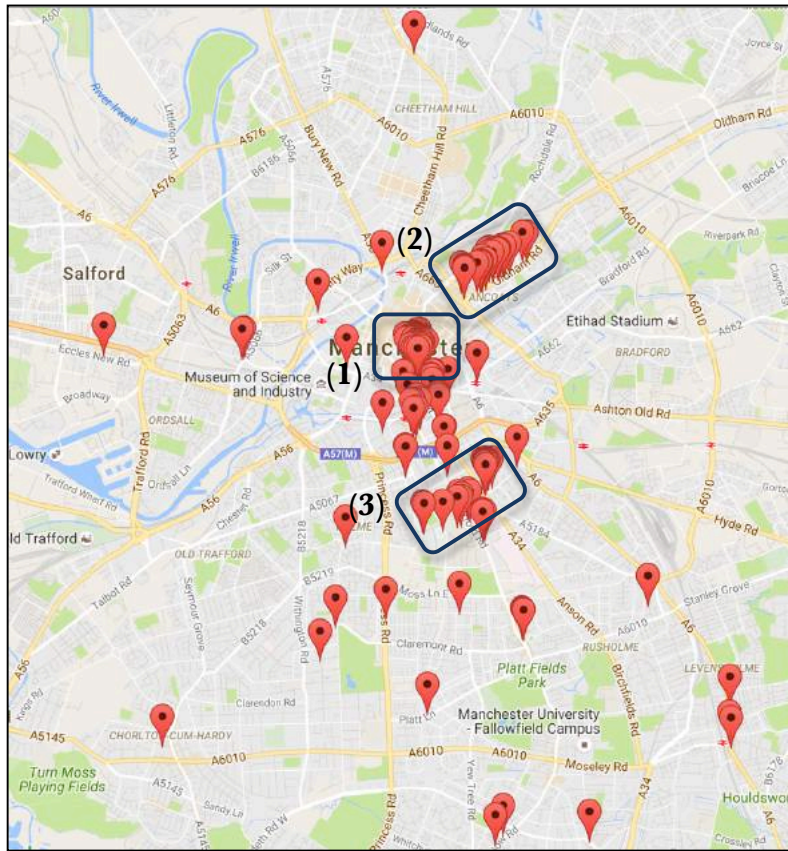


Figure 38. Chinese in Manchester's LL

Chinese appears as part of a densely concentrated 'Chinese space' in city centre's Chinatown (1), and along Oldham Road in Ancoats (2). There are small clusters of Chinese texts around the University (3). These areas are home to or frequented by Chinese speakers. Additionally, Chinese shows an isolated presence on signage of takeaway outlets scattered across the city. Here, patterns of language use suggest emblematic purposes rather than a need to convey information or content (Figure 39 for an example). Typically, English is used for communicative content, and Chinese characters offer merely translations of the outlet names. They are used as an ornamental design feature, exploiting the association of Chinese language with authentic Chinese food (Kelly-Holmes 2005; Seargeant 2012). Thus, Chinese characters are oriented towards wider audiences, functioning as a brand that is recognised across language communities.



Figure 39. Chinese takeaway sign (“Golden city”)

Figure 40 shows the distribution of Chinese texts that serve communicative functions. The map in Figure 41 is filtered for emblematic uses of Chinese. As can be seen, Chinatown and Oldham Road show frequent use of Chinese for communication; emblematic uses of Chinese are scattered across Manchester.

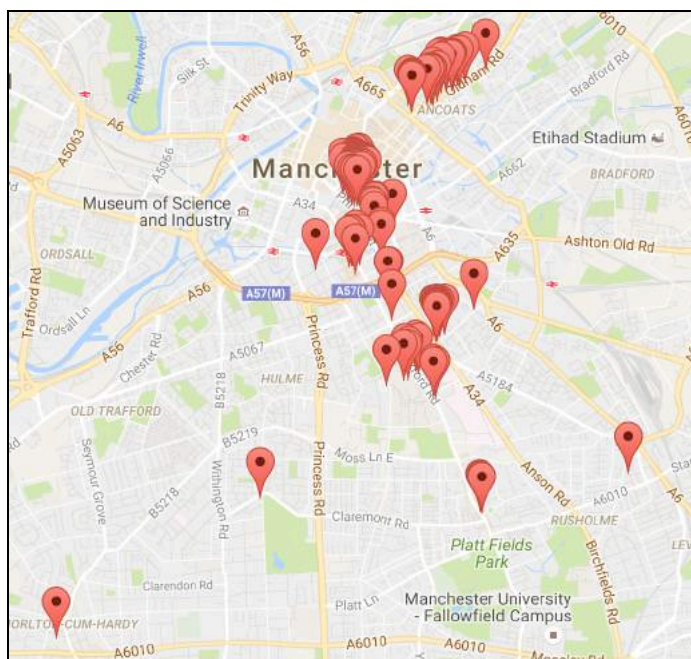


Figure 40. Distribution of ‘communicative’ Chinese signs

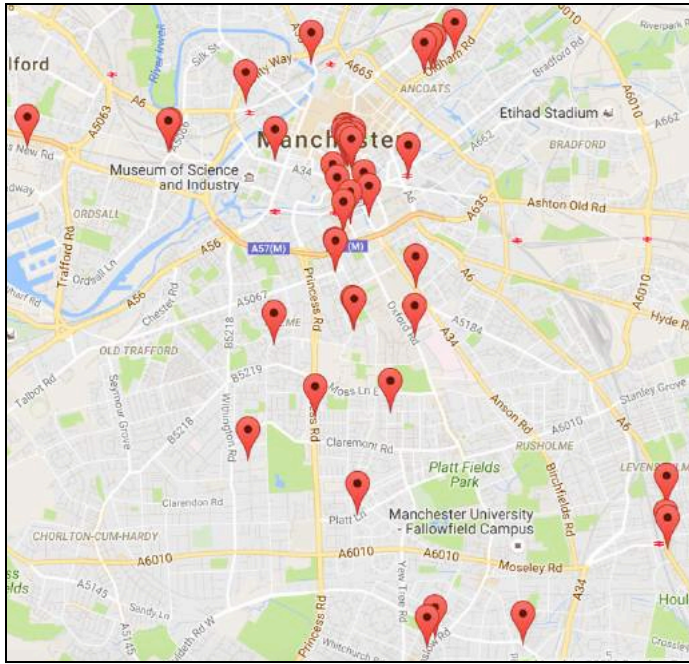


Figure 41. Distribution of 'emblematic' Chinese signs

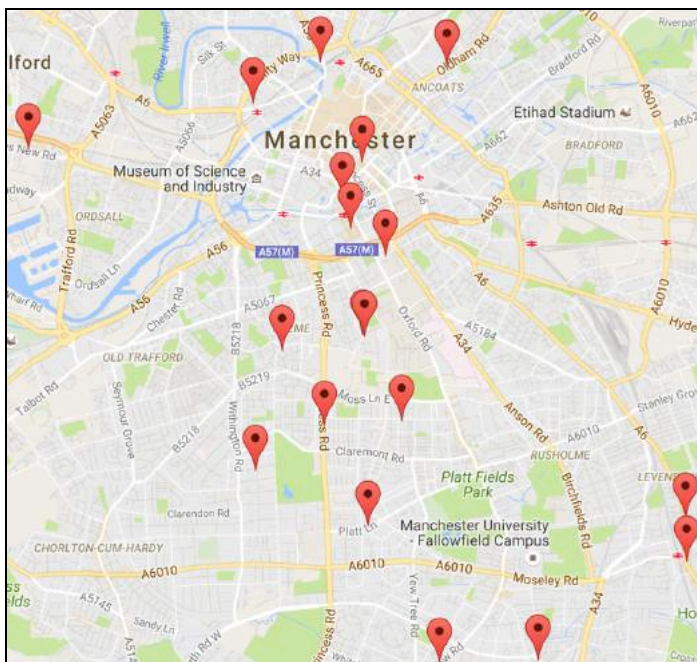


Figure 42. Distribution of takeaway outlets using Chinese on signage

Figure 42 shows the distribution of takeaway outlets using Chinese on their signage. This overlaps with the distribution of signs using Chinese for emblematic reasons (Figure 41). In other words, communicative use of Chinese is concentrated in areas that show a large presence of Chinese speakers, where it is used across outlets; Chinese signs scattered across the city tend to belong to food outlets that exploit the script's symbolic value.

The only parallel to the spatial distribution of Chinese as iconic symbol is the Arabic *حلال* ('Halal'); however, the respective scripts are associated in different ways and used to address different audiences. *حلال* is a religious symbol rather than a marketing device for outsiders. It is used for a kind of quality assurance and defines the target clientele based on shared Islamic customs.

6 LL distribution across sector and outlet

Language frequency overall

At the time of writing, the LinguaSnapp corpus for Manchester contains over 1,100 photo entries; 953 were available and were taken into consideration at the beginning of this analysis, collected between February–July 2016. 51 different languages were identified, which employ 16 different scripts. Manchester's LL features languages that are spoken across the world, including languages with widespread international functions as well as regional and minority languages.

The LL reflects the prominence of Urdu, Chinese, Arabic, and Polish as the most widespread community languages in Manchester (cf. Matras & Robertson 2015). The most commonly represented languages are Chinese (26% of the corpus; 247 signs), Urdu (23.4%; 224 signs), Arabic (22.2%; 212 signs), and Polish (8.2%; 78 signs). This count reflects, of course, the data that were collected. However, data triangulation shows that the LinguaSnapp corpus roughly matches other language datasets. Of the top 20 languages recorded on LinguaSnapp, 15 are also among the top 20 in the School Census (2015). The four most frequently encountered languages in Manchester's LL are also the top languages in the Census (2011) and among the top five languages requested for interpreter services at Manchester's GP practices.

The weak presence of Somali in the LL (21 signs, 2.02% of all signs) compared to census data is attributable to the fairly recent growth of the community in Manchester, and the presence of an incipient but growing Somali commercial sector. The relatively weak presence of written Panjabi (3.7% of the overall LL) compared to spoken use is partly due to the fact that Muslim Panjabi speakers, most of whom are of Pakistani background, tend to use Urdu as their written community language.

All languages in the corpus occur more frequently in combination with other languages, including English, than on monolingual signs, suggesting that language maintenance in the globalised setting does not reflect or reinforce segregation. In total, only around 20% of signs in the corpus were monolingual. The highest proportion of monolingual signs was found for Hebrew (51%), ironically, a language that is rarely spoken at all, and is often used in written form largely emblematically and otherwise as an internal written medium of communication in the religious institutions of Orthodox Jews. Many of the Hebrew signs we found were nameplates on private doors (see Section 9). For Polish, 38% of signs were monolingual; many of those are private

notes and posters posted on noticeboards in Polish churches, community centres, and grocery shops. Around 10% of signs containing Arabic or Urdu, and 19% of those containing Chinese, were monolingual. In general, the appearance of monolingual signs indicates either community-internal communication or the flagging of community-internal cultural identity and practices. Monolingual texts in Italian, Japanese, and Portuguese, languages that have just small numbers of speakers in the city, serve primarily emblematic functions in authenticating products and outlet names.

Chinese is frequently combined with English, but rarely with other community languages. Signs on which Chinese appears alongside other community languages are generally not produced within the Chinese community but by external organisations, and usually represent 'top-down' interventions in the public sector (such as advice on health care). Polish, with a high rate of monolingual signs, appears in combination mainly with other Eastern European languages, in addition to English. Yiddish usually appears alongside Hebrew, reflecting the community diglossia in which Hebrew is used for ceremonial functions and Yiddish is the language of everyday informal interaction, as well as the fact that Yiddish writing invariably embeds entire Hebrew phrases. Urdu texts that relate to cultural and religious celebrations similarly embed Arabic terms and phrases. Arabic appears in combination with a wide range of languages, especially English, Urdu, Sorani Kurdish, Persian, Somali and Bengali. This is partly attributable to its religious significance. Urdu combines with English as well as, most frequently, with Hindi, Gujarati, and Arabic.

Some languages appear almost exclusively in combinations with other community languages (and at the same also in combination with English): 95% of Sorani Kurdish signs also contained Arabic. The Sorani speaking community is mainly from Iraq and its local businesses serve a large Arabic-speaking clientele of diverse backgrounds, so the use of Arabic represents both the community's own heritage and its local commercial outreach opportunities. Lithuanian is usually found in a language combination that also contains Polish and Russian, and Czech is usually found in a language combination that also contains Polish, while Bengali and Gujarati both usually appear in a language combination that also contains Urdu. These combination patterns offer a distinct lens through which we might re-visit the notion of 'community': It is evident from this material that Manchester's population groups regard themselves not just in strict terms of 'communities' that speak particular languages and originate from particular countries, but also as clusters of groups from an assembly of countries with an assembly of languages whose paths frequently cross in the globalised setting of Manchester – often enough to merit *ad hoc* codification in the communicative acts that are delivered through signage. In other words, signs in multiple community languages are indicators of emerging population groups that share practices; the choice of languages on the sign conveys boundaries and at the same time alliances.

In some cases, such as Sorani Kurdish and Arabic, or Hebrew and Yiddish, the combination reflects the long-standing community's own complex repertoire. A case in point is the appearance of Italian shop and restaurant signs on outlets owned by Somalis on Claremont Road in Moss Side, in close proximity to shops that display signs in Somali. Italian is part of the historical language repertoire of the Somali

community. Kurds use Arabic, a language in which they are fluent, for communicative purposes in order to reach a broad Arabic-speaking audience in Manchester. By contrast, use of Italian in Somali outlets is confined to outlets names and is thus an emblematic gesture aimed at authenticating products and services (Figure 43).



Figure 43. Use of Italian on café signage in Moss Side

While in some cases the extended repertoires are visible through the combination of languages on individual signs, in the case of Somali and Italian it is the spatial co-occurrence of the two languages (in close proximity to one another) that reflects that repertoire, adding yet another dimension to the effect of spatial clustering and demarcation (see Section 7).

Distribution across sectors

Manchester's multilingual signage is primarily a bottom-up rather than top-down phenomenon. Private signs constitute by far the largest sub-corpus (80.3% of the corpus; 765 signs), followed by voluntary sector signs (13.3%; 127 signs). Public sector items make up the smallest proportion of the data (6.4%; 61 signs). The bottom-up sub-corpus comprises a much greater range of languages than the top-down sub-corpus, confirming findings on other LLs (Landry & Bourhis 1997; Pietikäinen et al.

2011). For Manchester's private signs, we identified 43 different languages. By contrast, only 17 different languages are recorded for public signs. The language range found on voluntary sector signage comprises 30 different languages.

Chinese is the most frequently used language of all **private sector** signs, with 29.8% of recorded multilingual or non-English private sector signs, closely followed by Arabic (24.2%) and Urdu (22%). Polish is next with 6.9%, followed by Persian, Hebrew, Sorani Kurdish and Somali, each with upwards of 2.6% of all recorded private sector signs. The presence of Chinese at the top of the list reflects the Chinese community's strong economic orientation toward family-based, local commerce and services, and the strong marketing value attached to Chinese, both within the Chinese community itself, and, in an emblematic manner, in its outreach to other, non-Chinese audiences, especially in the restaurant and take-away industry (see discussion below). By contrast, the economy of the Urdu speaking community is much more diverse; small businesses that cater primarily to the Pakistani community itself make up a more modest component, by comparison, while no or little value is attached to Urdu signage for outwards-reaching marketing.

The strong presence of Arabic in private signs reflects the recent growth of Manchester's Arabic-speaking population, partly attributable to the arrival of refugees from Iraq, Syria, and Kuwait (Gaiser & Matras 2016: 30). This increase in Arabic speakers in Manchester is confirmed in different language data sets. Between 2013 and 2015, there has been a 23% increase in the number of young Manchester residents (children under 16) who report Arabic as their 'first language' in the School Census (2013; 2015). In the Census (2011), which represents the overall community over the age of 3, 8.8% of Manchester's residents who speak a language other than English indicate Arabic as their 'main language'; the School Census (2015) records 11.1% for school children. The growth of Manchester's Arabic-speaking population is also confirmed by a rising demand for Arabic interpreter services at Central Manchester University Hospitals NHS Foundation Trust (CMFT). There has been an increase of 30% in requests for Arabic interpretation from 2013/2014 to 2014/2015, and another slight increase by 6% in the following year (Gaiser & Matras 2016: 30). The large proportion of Arabic on private signs indicates how the bottom-up LL mirrors the population's language practices and needs. Allowing for spontaneous, largely unregulated participation, the LL nicely reflects the dynamism of language practices (cf. Blommaert 2014; Barni & Bagna 2009).

For Chinese, Arabic, Persian, Sorani Kurdish, and Somali, the overwhelming majority of signs belong to the private sector: More than 90% of Chinese signs are private items, and just 2.8% are public signs. Similar figures are found for Arabic, with 86.8% and 2.8% respectively, while for Urdu the figures are 75% and 17% respectively. The other named languages, too, all show over 84% of signs in the private sector, and 5% or less in the public sector. A further group of languages constitute a separate category, where private sector signs are in the lead, but where there is also a significant presence of recorded signs in the **voluntary sector**. These include Polish (68% private, 24.3% voluntary), Hebrew (50% private, 50% voluntary), and Bengali

(50%, 30.7% voluntary), whereas for Panjabi the majority of signs (88.6%) are recorded in the voluntary sector.

The relatively strong presence of these languages in the sub-corpus reflects the strong presence of established community associations and religious congregations. While Panjabi is one of the more widespread spoken languages in Manchester, self-declared as ‘main language’ by some 4,700 people in the Census 2011 (16,000 in Greater Manchester), in written form it is used exclusively by the Sikh population, a minority numbering just over 2,500 persons (5,300 in Greater Manchester). Use of Panjabi on signage is recorded largely at local Gurdwaras, and there, largely to interior signs such as noticeboards rather than those that are on public display at street level (see below). Hebrew is used on the façades and in the interior of synagogues, religious learning institutions and the buildings of charity organisations, while Polish is found in churches. Use of Bengali in the voluntary sector is found both in mosques and institutes of religious learning and in various charitable community associations.

Arabic and Urdu, too, feature on the signage of religious institutions, and Chinese is used alongside English on the façades of Chinese churches and community organisations. The presence of Polish, Panjabi, Chinese, Bengali, Arabic and Urdu on voluntary sector signs mirrors their active spoken use in Manchester, as reflected in various other datasets. This contrasts with Greek and Armenian, whose presence on voluntary sector signage reflects religious traditions rather than communicative functions, while for Hebrew we found a mixture, with a prominent role in flagging the titles of institutions, but also conveying instructions and other recruitment messages on posters in the interior of religious institutions in the Orthodox Jewish neighbourhoods of North Manchester. Typically, voluntary sector signs are put up by the respective language communities. The signs are often audience-specific and address in-group members, which accounts for the relatively high proportion of monolingual signs (34%) as compared to the proportion of monolingual signs in other sectors (11.4% in public sector signage; 19.2% in private sector signs). The frequency of individual languages on private and voluntary sector signage is, by and large, a reflection of their overall frequency or use among local residents – usually as spoken language, but in the case of Hebrew, often as an ‘unspoken’ language, i.e. a language that is read, recited, as well as actively written in contemporary texts, while only some within the Jewish Orthodox community, who are recent immigrants from Israel, use it in everyday oral conversation.

By contrast, the frequency of languages in **public sector** (‘top-down’) signage reflects measures taken by public institutions, which might be regarded as a form of policy and planning, at the very least at the micro-level (cf. Matras & Robertson 2015). This can be seen as the product of negotiation among a series of actors both within and outside the relevant institutions. In Manchester, 60% of all multilingual or non-English public signs contain Urdu. This is without a doubt a reflection not just of the strong and long-established presence of speakers of Urdu, who make up the largest minority language group in the city (13,000 self-declared ‘main language’ in the Census 2011), but also the strong involvement of the population of Pakistani heritage in the city’s institutions, including political representation in the City Council, which at

the time of writing had around 10% elected members of Pakistani background. Public signs make up just over 13% of signs recorded in Bengali, which is next in line after Urdu, while Chinese, Arabic, and Polish each show around 10%. These are often used in combinations on signs that target several communities, or on multilingual leaflets. Hindi, French, Gujarati, Panjabi and Turkish all have a presence on posters and leaflets primarily in the health sector, and on safety and security notices such as those issued by police and airport authorities. (For a discussion of 'top-down' signage see also Section 12 below).

Distribution across outlets

Language choice often correlates with the type of business and depends on the nature of activities particular groups are engaged in (cf. Huebner 2006). In Manchester's bottom-up (i.e. private and voluntary sector) LL, the most frequent use of multilingual or non-English signs was found in general food shops and supermarkets (18.03% of the total number of private sector signs recorded), restaurants (13.98%), fast food/take away outlets (10.98%), grocery and corner shops (8.23%), bakeries and butcher shops (4.96%), travel agents and cargo agents (4.96%), hairdresser and beauty salons (3.66%), and estate agents (2.61%).

As a rule, the choice of language on private sector and voluntary sector outlets can be understood to reflect in the first instance the language of the proprietors and the intended customer audience. Butchers serving a Muslim clientele tend to include Arabic and Urdu in their signage. Tailors use Urdu, Arabic, and Kurdish signs, reflecting their own backgrounds. Similarly, many of Manchester's travel/cargo agencies have Kurdish or Arab owners, who use their languages to advertise audience-specific services. There are a number of Indian or Panjabi clothing stores in the Rusholme and Longsight area that use Urdu on their signage, reflecting the background of their owners and target clientele. Money transfer services use Arabic and Urdu on their signage, again indicating sign writers and expected readership. Signage of hairdressers frequently includes Arabic, Kurdish or Chinese. Larger companies, such as international telecommunications companies, produce posters in Romanian, Polish, Lithuanian and Chinese to advertise audience-specific offers. These are often found on shop outlets where they do not necessarily represent the languages of the owners, but an awareness of a potential, local customer audience.

Restaurants usually target wider audiences, but often use a language associated with their cuisine in visibly dominant positions on their signage. Chinese is the language most frequently used on the façades of restaurants and takeaway outlets, followed by Arabic and Urdu. A number of restaurants and cafés use Italian, Spanish and French for marketing purposes rather than for strictly communicative functions (see Figure 43; cf. Gaiser 2014). These languages do not necessarily reflect the business owners' or sign-writers' ethno-linguistic backgrounds. Rather, they are used for their connotative values, associated with particular cultures that are believed to have expertise in the relevant product or service area (Kelly-Holmes 2005; Leeman & Modan

2009). Rusholme's shisha bars feature Arabic to create a sense of authenticity, despite the fact that most of them have Kurdish owners, as well as to advertise their service to an Arabic-speaking clientele. Some outlets do not tend to use languages other than English: There are no or very few LinguaSnapp entries for post offices, car dealers, petrol stations and PC/Electronics outlets. Their consistent use of English only may be partly due to the companies' centralised decisions on language use, and may be partly attributable to the connotations of English with reliability and modernity (Haarman 1989).

Language use on bottom-up signs can offer insights into the complex repertoires of Manchester's minority language communities and their efforts to maintain their heritage: Monolingual Chinese texts advertise Chinese language courses for children, suggesting that the parent generation understands Chinese while the second or third generation of immigrants may need formal lessons for (written) proficiency (see Figure 44).¹⁰

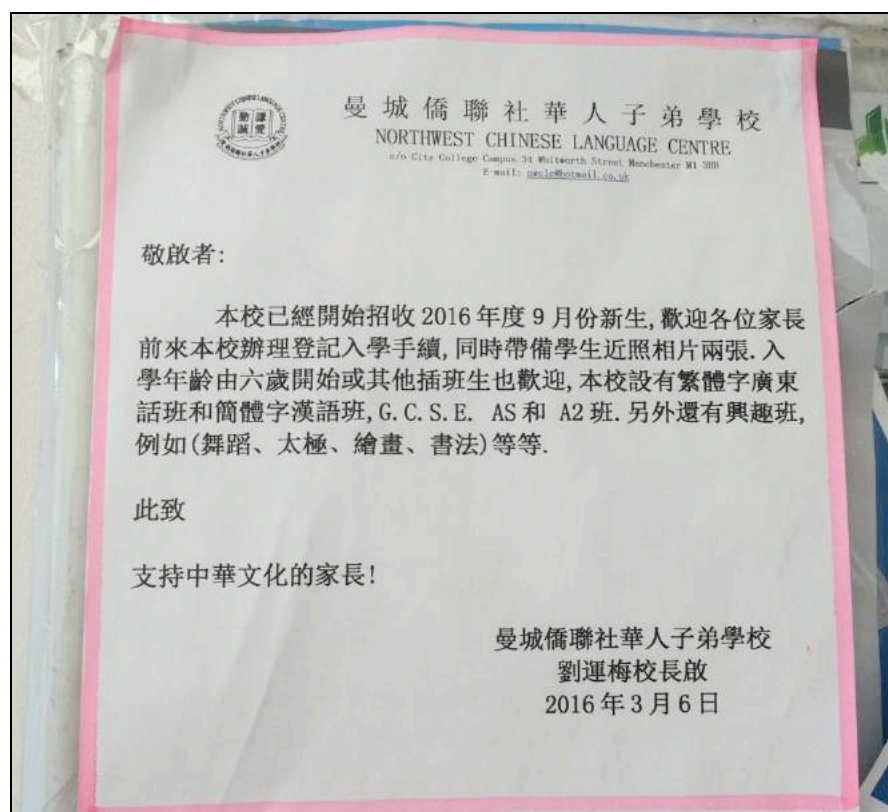


Figure 44. Northwest Chinese language centre notice in Chinatown

¹⁰ Translation of text in Figure 44: "Chinese language centre's notice. About admission for year 2016. Need to bring photos. For kids from age 6. Teaching both Simplified and traditional GCSE & A-LEVEL. Also dancing, tai-chi, drawing, calligraphy etc. Thanks!"

Consistent bilingual Panjabi-English signs inside the religious and educational centres of Manchester's Sikh community (Gurdwaras) reflect the community's complex language situation. A considerable proportion of the community's elderly members, as well as recent arrivals, are proficient in Panjabi but not necessarily fluent in English. Second and third generation immigrants, on the other hand, who have been formally educated in the UK, speak English but are not necessarily literate in Panjabi. Language signs inside the community's Gurdwaras offer indications of inter-generational language shift and the structural transformation of language repertoires (Figures 45; 46; 47).



Figure 45. Bilingual labels in Gurdwara kitchen: Panjabi, English

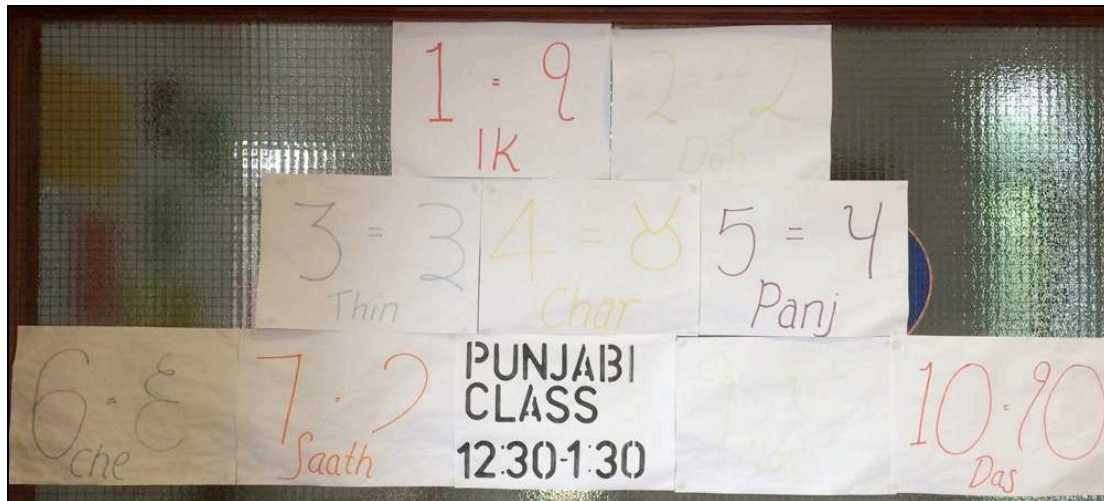


Figure 46. Posters inside Gurdwara: Panjabi in Gurmukhi and Roman script

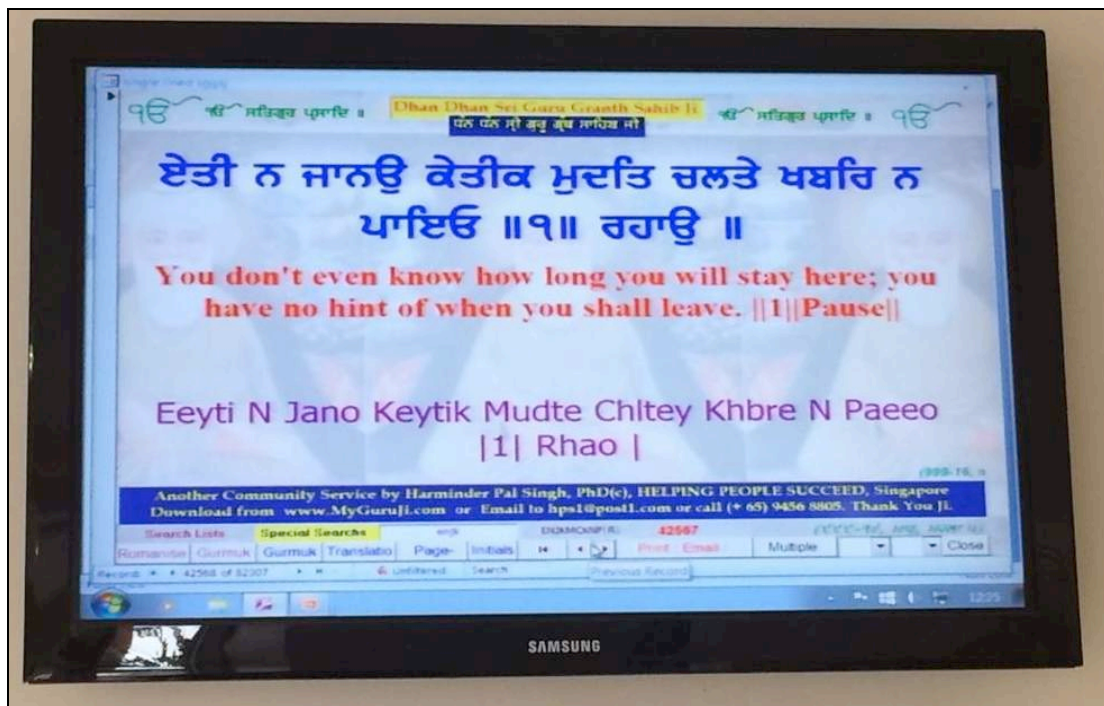


Figure 47. TV screen inside Gurdwara: Panjabi in Gurmukhi and Roman script, English translations

Similar practices are found in the use of Roman script for Urdu/Hindi. Such practices allow to reach wider audiences: Urdu and Hindi use separate scripts but are mutually intelligible in their spoken forms. Using the Roman script thus includes both Hindi- and Urdu-speakers, and is inclusive of those who cannot read South Asian scripts (see Figure 24).

7 The symbolic construction of place: Spatial clusters in Manchester's LL

The clustering of languages in the LL signals ownership and serves to use semiotic means to construct place (Ben-Rafael et al. 2006; Blommaert & Huang 2010). As Blommaert (2013: 43) notes, “one of the major functions of public signs is *demarcation*” (emphasis in original). In this section we discuss the ways in which signage in some of Manchester's community languages serves to construct space.

Urdu, Arabic and Polish

Urdu, Arabic and Polish signs are densely concentrated in Cheetham Hill, one of Manchester's most diverse neighbourhood. Figures 48 to 50 below illustrate the spatial distribution of these languages along Cheetham Hill's high street.

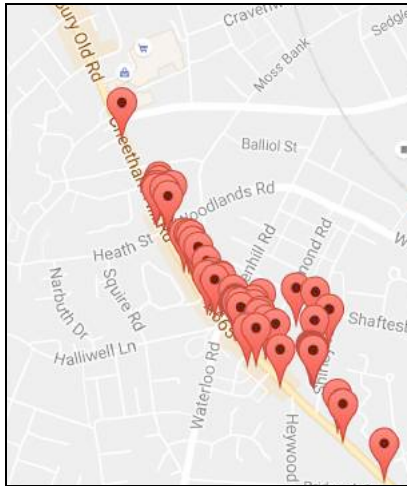


Figure 48. Distribution of Urdu signs on Cheetham Hill Road/Bury Old Road

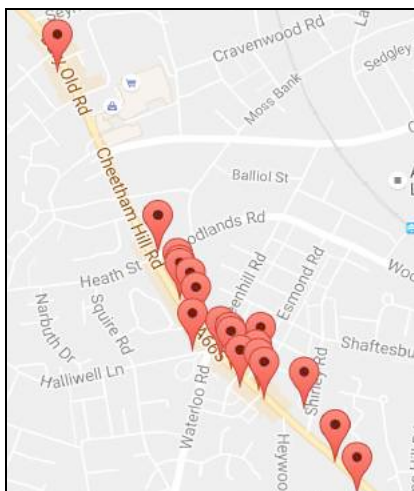


Figure 49. Distribution of Arabic signs on Cheetham Hill Road/Bury Old Road

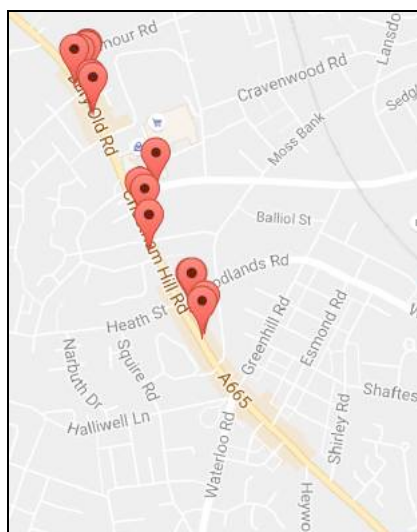


Figure 50. Distribution of Polish signs on Cheetham Hill Road/ Bury Old Road

Urdu is most prominent in the southern stretch, where it often appears alongside Arabic. Both languages are used on signs of money exchange businesses, travel/cargo agents, supermarkets, clothes shops and butchers. Bilingual English-Urdu Council signs that advise readers on waste disposal acknowledge the presence of Urdu in the area and complement the bottom-up LL pattern. With a decreasing presence of Urdu and Arabic towards the northern stretch of the street, the presence of Polish in the LL increases. A number of Polish shops use their language on outdoor-and indoor-signage, and Polish hand-written notes placed by private individuals contribute to shaping a sense of place. The juxtaposition of language clusters in an otherwise highly diverse LL subdivides the high street into two contrasting commercial zones. The LL demarcates the areas frequented by the different communities and maintains symbolic boundaries of “spatial practices” (Lefebvre 1991). The LL thus becomes a space where LL-actors negotiate claims to ownership, which illustrates the power of semiotic resources in the making of place.

The co-presence and juxtaposition of languages in Manchester’s LL organises neighbourhoods – at the purely symbolic level – into ‘ethnically defined’ zones. Some languages are concentrated in a few streets, while others are limited to signs in neighbouring outlets. Such clustering of languages is not necessarily a result of a conscious effort to mark space; yet, consistency in signage has the power to shape the local identity of a given place, which ends up demarcating shared space. At the same time, the co-occurrence of Arabic and Urdu in effect marks a symbiosis of the two communities, which share stretches of residential spaces as well as commercial domains in which they interact with one another on a regular basis. This is also reflected in the co-presence of Urdu and Arabic in Rusholme’s LL (see Figures 34; 35). The shared use of script forges additional links, as, at the very least, outlet names and Islamic formulaic signs are accessible to both language communities.

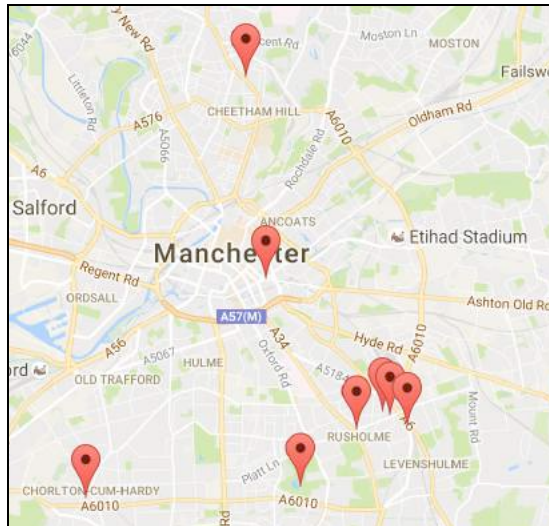


Figure 52. Distribution of Bengali 'public' signs in Manchester

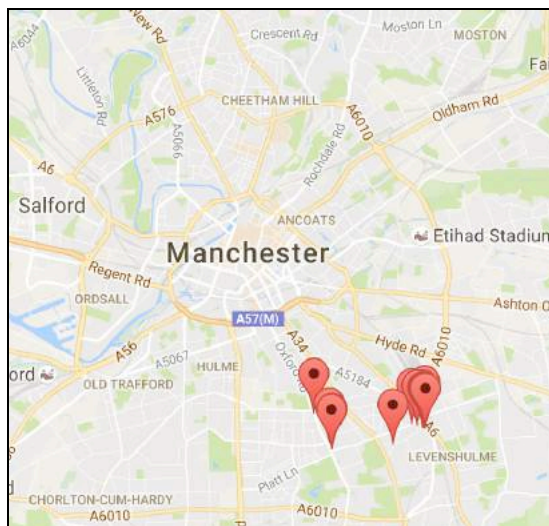


Figure 53. Distribution of Bengali 'private' signs in Manchester

In addition, it is highly concentrated in a residential area in Longsight in just a couple of neighbouring streets (Figure 54).



Figure 54. Distribution of Bengali 'private' signs in Longsight, close-up

These texts are mostly home-printed or hand-written monolingual notes attached to business outlets, informing readers about audience-specific services, products or events (e.g. Figure 55). Such notes presuppose Bengali writers and readers, thus indexing the presence of a community that actively uses its language for in-group interaction. The density of Bengali in an otherwise multilingual landscape defines the relevant section of the neighbourhood and creates a contrast to the surrounding landscape, linguistically demarcating space. The public display of the in-group language may be seen as the community's "claim to ownership and legitimate presence and belonging to the semiotic landscape of the neighbourhood" (Blommaert & Huang 2010: 10).

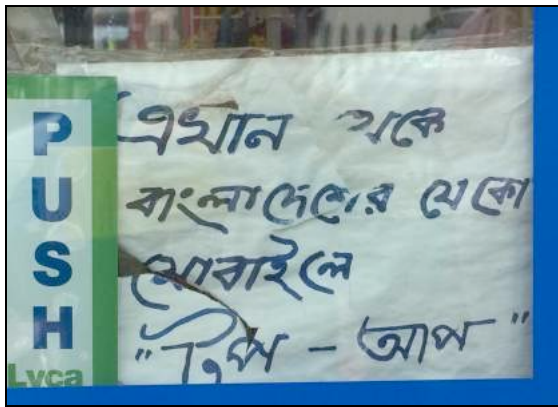


Figure 55: Notice at shop front in Longsight: Bengali ("top-ups for Bangladeshi mobile services available here")

Somali

Somali LL-signs are highly concentrated in South Manchester, but barely visible in other parts of the city (Figures 56 and 57). Somali signs cluster along a stretch of Claremont Road in Moss Side, an area characterised by a strong presence of Somali speakers (School Census 2015; GP interpreter requests 2014/2015).

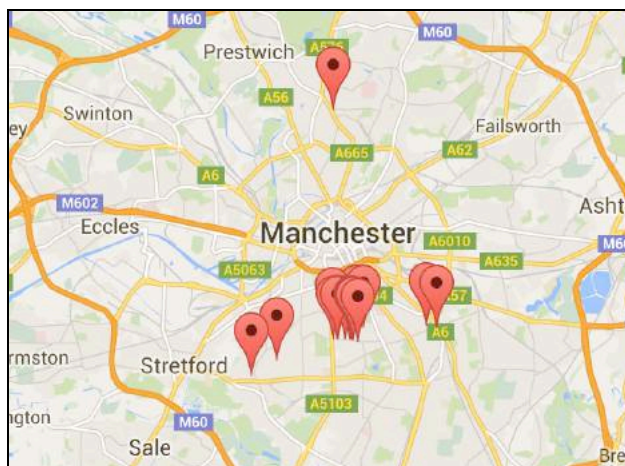


Figure 56. Distribution of Somali signs in Manchester

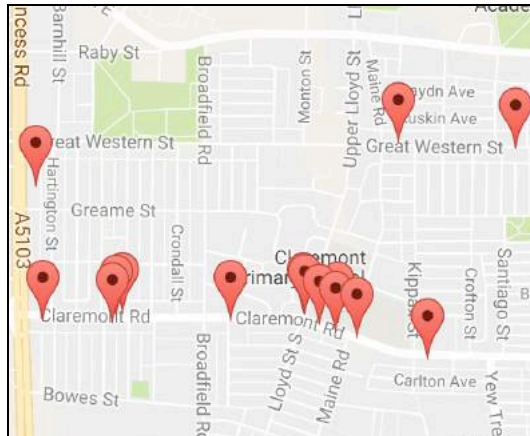


Figure 57. Somali cluster in Moss Side

From a total of 21 Somali signs recorded in the city during the observation period, 15 were found in Moss Side. Along Claremont Road, Somali is highly visible in a relatively homogeneous LL, used alongside English and some instances of Arabic (as well as emblematic use of Italian; see below). Somali is used in signage of Somali-owned businesses and in private notices put up by individuals. All Somali texts in the neighbourhood use Somali primarily for communicative purposes.

A local Somali children's football team have put up bilingual posters to invite the community to their Youth Cup match (Figure 58). English is used for the title, a slogan, date and time of the match, and contact details. The contact details show a Somali/Arabic name, indicating the sign-author's background. A Somali text explains that the team is run by local Somali people and asks community members for support. Thus, Somali is used for personal and community-related content, promoting community cohesion and heritage.



Figure 58. Event advertisement poster at shop front in Moss Side: Somali, English

A similar pattern of complementary writing was found on a poster that advertises an event at the local mosque (Figure 59). The text presupposes a multilingual readership, which uses different languages for different purposes. English is used for the 'here and now', conveying information on time, location, and contact details. Somali, on the other hand, is used for more detailed information on the event. In addition, the poster includes the mosque's name in Arabic as part of a logo.



Figure 59. Islamic Centre poster at shop front in Moss Side: English, Somali, Arabic

The combination of languages mirrors individual and community identity: It indicates complex, multi-layered identities shaped by the British diaspora context, yet emphasising Somali heritage. The clustering of Somali in the area's LL reflects its local relevance and demarcates space linguistically, creating a contrast to nearby commercial areas. This expresses a sense of collective identity which indirectly excludes out-group members. Somali signs thus express the community's "interest in promoting the use of their own-group language" (Landry & Bourhis 1997: 45), using the LL as space of empowerment.

Persian

Persian has been found in the LL of Levenshulme and Cheetham Hill, and in a single takeaway outlet in Rusholme. The signs belong to Iranian businesses that use their language for the marketing of audience-specific products. The resulting concentration of Persian in the LL shapes the identity of the area. Individual community members add to this sense of place, using monolingual Persian texts to address the local Persian speaking community. A monolingual Persian funeral announcement, attached to the

façade of a supermarket, flags and legitimises the community's presence in the neighbourhood. As Blommaert (2013: 66) explains, "communities who publicly announce cultural events in their languages display some degree of confidence". The choice of Persian reflects the very personal nature of the notice and indicates that the message is irrelevant to out-group members. Such inwards-focusing texts create a sense of place oriented towards community values, which contributes to structuring space.

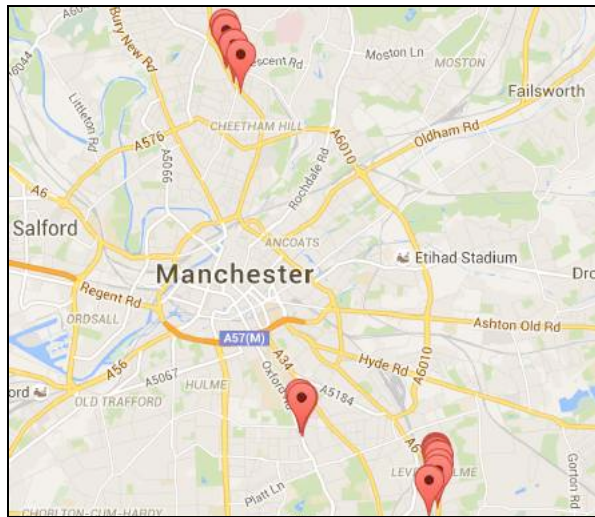


Figure 60. Distribution of Persian signs in Manchester

Thai

Spatial demarcation through language use occurs also within more homogeneous LLs. There is a small 'Thai corner' in Chinatown, an area otherwise dominated by Chinese signs. Six Thai LL-items have been found in Manchester, all of which cluster along a short stretch of George Street (Figure 61; 62).



Figure 61. Cluster of Thai signs in Manchester

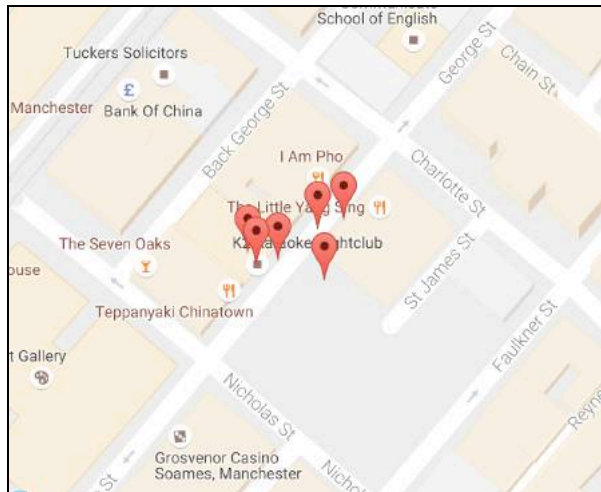


Figure 62. Distribution of Thai signs in Chinatown

While a Thai supermarket and a Thai restaurant on that street have monolingual English signage, Thai is used on “amateurish” (Blommaert 2013) and visually inconspicuous notices on the façades of and inside two Chinese minimarkets. These monolingual signs advertise job vacancies for “Thai waiters” and “front of house staff”, conveying audience-specific information to fellow community members (Figure 63). The language choice suggests that potential staff members, who will be in customer contact, are required to understand Thai, mirroring the active use of Thai in the area.



Figure 63. Monolingual job advertisement in Chinatown: Thai

Figure 64 shows a duplicating Thai-English job advertisement. The contact telephone number, originally written in Arabic numerals, has been covered by Thai numerals. Again, the sign indexes the LL-actors' and intended readers' language proficiency. Differences in script choice across the layers foreground the intention to target the job vacancy specifically to Thai readers, as the added layer puts emphasis on exclusivity. The act of covering the Arabic numerals indicates the aim to strengthen the Thai network and exclude out-group members.



Figure 64. Bilingual job advertisement in Chinatown: Thai, English

We found one professionally produced sign in Manchester's Thai quarter, which is a monolingual Thai 'welcome'-sign. In contrast to the Thai LL-items discussed above, the 'welcome'-sign serves emblematic purposes. Yet, both types of audience-specific language use add to the demarcation of a small Thai enclave within Chinatown, in which the use of Thai seems legitimate. As opposed to the emblematic use of Chinese characters for marketing purposes, the use of Thai is inward-focused. It addresses members of the community, who can understand the messages conveyed, rather than out-group members who may purchase ethnic products in the Thai supermarket or come to the area to sample Thai cuisine.

Absence of public visibility

In some cases, language practices remain within community contexts. In Manchester, Yiddish and Panjabi texts are completely inwards-looking. Despite the high spatial concentration of Yiddish speakers in the Greater Manchester districts of Salford and Bury, it is very difficult to find Yiddish writing on signage that is publicly visible. Its written use is restricted largely to notice boards inside community institutions (see Sec-

tion 9). Similarly, written Panjabi remains generally hidden from the public, confined to the interior spheres of the community's Gurdwaras (Figure 65).



Figure 65. Bilingual sign inside Manchester Gurdwara: English, Panjabi

8 Spatial demarcation: Manchester's Chinatown

Language consistency in signage results in a demarcation of space, creating in a symbolic sense 'ethnically-defined' areas within the larger neighbourhood. This section explores how Chinese serves for purposeful linguistic demarcation of space, identifying place in contrast to neighbouring areas.

Almost half of the Chinese signs recorded cluster together in Manchester's Chinatown (see Figure 38). The city-centre area is today characterised mainly by Chinese (but also Japanese, Malaysian, Singaporean, Thai and Vietnamese) ownership including restaurants, bakeries, supermarkets, and other businesses that serve local Chinese residents, international students from China, as well as non-Chinese visitors. Alongside the giant archway, Chinese-inspired architecture, streetlamps, and traditional colours and symbols, language use on signage is today part of the "purposeful construction of an imagined Chinese space" (Amos 2016: 137; Leeman & Modan 2009). The LL thus reflects and serves to maintain the area's Chinese character: Out of a total of 121 non-English signs recorded for Manchester's Chinatown area, 106 contain Chinese. In relation to the diverse LLs in other parts of the city, Chinatown's LL is a consistently bilingual landscape: Only a few Thai texts are visible in the landscape that is clearly dominated by Chinese and English. The dense clustering of Chinese contributes to defining the area as Chinese and serves an outwards-looking function of spatial demarcation through the contrast to neighbouring areas.

Emblematic language choice and audience inclusion

Like the takeaway signage across the city, many of the signs on the façades of Chinatown's restaurants and supermarkets use Chinese primarily for emblematic purposes rather than to convey content to Chinese readers. They are fragmentary bilingual texts that use English rather than Chinese to convey information. While this audience cannot understand nor read Chinese characters, the presence of the script itself attracts the attention of potential customers, commodifying a given outlet and the area as 'authentically Chinese'. In some cases, Chinese characters are accompanied by Pinyin or a popular transliteration, emphasising audience inclusiveness. The sound of Chinese is in this way made accessible to non-Chinese readers and the sign thereby symbolically includes out-group members in what is perceived as an in-group discourse (Figure 66) (cf. Amos 2016).



Figure 66. Café signage in Chinatown: Chinese (“tea records”), Pinyin transliteration, English

In a small number of bilingual signs found in the area, the Chinese characters used are ‘nonsensical’: They do not convey any meaningful message but are included for decoration and effect. In these cases, the communicative potential of Chinese “has come to be obscured or mystified through the process of fetishization to the point where it becomes irrelevant” (Kelly-Holmes 2005: 24). The text in Figure 67 uses simplified Chinese characters. Contrary to the conventions of simplified Chinese, the text vector is right-to-left. This is “nowadays reserved for symbolic use of traditional Chinese culture” (Lou 2007: 180), expressing the desire to maintain Chinese heritage. However, this additional indexical value is accessible only to readers of Chinese. The unconventional way of writing simplified Chinese characters suggests that priority is given to its iconic rather than communicative value, targeting non-Chinese rather than Chinese readers.



Figure 67. Restaurant note in Chinatown: Chinese (“New Emperor restaurant”), English

The Chinese sense of place is articulated not only by community members themselves; non-Chinese actors participate in the commodification of Chinatown. Three British bookmakers use bilingual English-Chinese signs on the façades of their Chinatown-based outlets. Two of these deviate from their company colour scheme to use red and gold, which are colours traditionally associated with Chinese culture (cf. Leeman & Modan 2009). The Chinese characters on their signs are merely phonetic transliterations of the company names (Figure 68), while English is used to convey information. The signage highlights the aesthetical value rather than the communicative potential of Chinese script. Conversations with staff members of the three bookmakers reveal that, although a considerable proportion of their clientele have a Chinese background, English is used for communication.



Figure 68. Bookmakers’ sign in Chinatown: Chinese, English

Unlike Chinese-owned businesses, these British companies use Chinese characters in order to fit in with the general theme of Chinatown rather than to add to the authenticity of their services. The commodification of Chinese has thus led to a “de-linking” of Chinese writing from Chinese people and culture (Leeman & Modan 2009: 354). The Chinese outdoor signage of non-Chinese businesses contributes to a coherent look of Chinatown, justifying these outlets’ presence in the area and tying it to the Chinatown locale. The signs suggest that the businesses accept Chinese as the dominant language and culture in the area, and express their desire to accommodate to and engage with the Chinese community.

Asian-themed decorations put up by Manchester City Council constitute top-down efforts to cultivate the area’s Chinese identity (Figure 69). The City Council officially recognises and celebrates Chinese culture, dedicating Chinatown to the Chinese community. At the same time, this opens up the area to wider audiences for whom Chinatown constitutes a site of cultural consumption. The emblematic use of Chinese in Chinatown’s LL thus serves both outwards- and inwards-looking functions. In its orientation to out-group members, the display of Chinese characters exploits the script’s visual appearance and its power to create associations with authentic ‘Chineseness’ (cf. Amos 2016). The use of Chinese and Pinyin for emblematic purposes, and of English to convey content, makes the signs audience-inclusive. For both in-group and out-group members of the Chinese community, the use of Chinese signs contributes to demarcating the area as an ethnically defined place. At the same time, Chinese LL-items mark the presence of a Chinese community that uses the language also for community-internal communication. In this way, as its name suggests, city-centre Chinatown is a pre-defined ethnic place that has historically been a Chinese enclave and subsequently received top-down recognition.



Figure 69. Spring Festival decoration in Chinatown: Chinese (“good fortune”)

Communicative Language choice and audience exclusion

Almost a quarter of the texts recorded in Chinatown are monolingual Chinese. Additionally, we have found 22 English-Chinese signs that provide full information in Chinese only, but offer English translations of the outlet name. In these cases, the functions of Chinese go beyond mere “atmospheric” use (Cook 2013): The signs convey information to a Chinese-reading clientele while excluding others from the readership. Many of these audience-exclusive signs appear in restaurants, informing fellow community members about their menus or lunch deals (Figure 70).¹¹



Figure 70. Restaurant sign on lunch deals in Chinatown: Chinese, English

Due to their monolingual nature, the validity of such special offers is restricted to Chinese readers. Likewise, supermarkets use Chinese signs for in-group-oriented communication. While most price labels are bilingual and suggest the equal status of English and Chinese, additional monolingual Chinese texts convey information about audience-specific products (Figure 71).¹²

¹¹ Translation of Chinese sign in Figure 70: “Yayuan Pacific, Big Sale, Tea market from 12 to 3pm, Dim Sam (Desert) from 70% discount, afternoon tea from 3pm to 5pm, Dim Sam from 50% discount, Special small dishes, Special price from £5 each available for the whole day”.

¹² Translation of Chinese sign in Figure 71: “Vegetable £4.40, Pak Choi £3.95, King Oyster mushroom £7.95, Bitter gourd 6.95 per kg”.

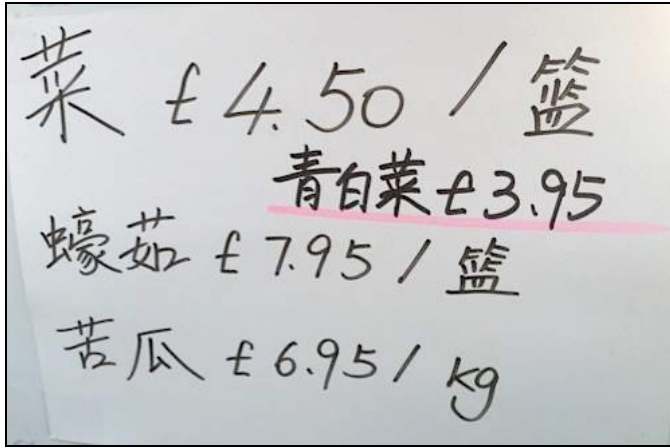


Figure 71. Grocery shop sign in Chinatown: Chinese

These signs contribute to the symbolic creation of Chinatown's identity, serving emblematic functions for the Chinese community as well as for out-group members. However, the Chinese texts have clear communicative purposes, and access to their content is through language choice that is made the exclusive property of those who are specifically targeted. The signs exclude non-Chinese readers (including, potentially, some second-generation Chinese who were formally educated in English but not in Chinese). Similarly, monolingual Chinese newspapers displayed in Chinatown add to a 'sense of Chinese-ness', but serve communicative functions for Chinese readers.

The most obvious indicators of the functional purposes of Chinese for in-group communication are the well-used noticeboards inside three Chinese businesses (Figure 72). The fact that the noticeboards are situated indoors limits their users to a clearly defined group of people (cf. Barni & Bagna 2009: 132f.; Amos 2016). They constitute a space for community members to put up improvised notes or leaflets, advertising services of small businesses and individuals, job offers and flats for rent. The handwritten or home-printed notes with torn off telephone numbers indicate active use of this space for interaction between community members. In addition, community organisations inform about their events and services. Most of these notices and leaflets are monolingual Chinese; English is rarely used within this 'Chinese space'. Language choice clearly defines the target audience, restricting access to information to Chinese readers.¹³ In the case of Chinese in Manchester, this reliance on community-internal advertisement suggests a sizeable Chinese-speaking readership as well as a focus on audience-specific products and services.

¹³ From conversations with the community organisation Wai Yin, we are aware that most staff members are proficient in English; yet, they have decided to use Chinese only.



Figure 72: Noticeboard signs inside Chinese bakery, Chinatown: Chinese, English

The fragmentary multilingual text in Figure 73 uses Chinese to convey information. English serves merely symbolic functions, creating a sense of international orientation and modernity (Haarmann 1989).



Figure 73. Advertisement poster Chinatown: Chinese, English

Figures 74 and 75 show a similar pattern. The use of English for domain-specific vocabulary (*food safety*; *half price*) is attributable to the uniqueness of these English terms, which convey specialised meanings that have acquired symbolic value in commercial settings – arguably, worldwide (Kick 2014). English serves emblematic rather than strictly communicative purposes in this ‘Chinese space’. These signs show the reverse pattern of emblematic language use to the one discussed above, where the decorative use of Chinese was intended for non-Chinese readers. The density of inwards-oriented Chinese signs defines these corners of Chinatown as ‘sites of exclusivity’, where products and services are offered to fellow community members (cf. Amos 2016). As Amos (2016) notes for Liverpool’s Chinatown, the texts are part of a “broader discourse of sharing, exchanging, buying, and selling to which non-Chinese readers are not granted access” (Amos 2016: 147).

FOOD SAFETY

食品安全二級證書課程

誰合資格?
本課程為從事餐飲業的人員包括酒店、餐廳、咖啡廳、酒吧、快餐店、外賣店、醫院、學校和學院而設。

此課程為何重要?
學員認識食物衛生和安全守則，確保顧客享用安全食品。

課程目的：

- 了解食品安全管理系統
- 了解如何管理食品安全風險（個人衛生，食品儲存，烹飪和處理）
- 應用食物衛生的知識

課程日期：

星期一	星期二
9月12日	8月2日
7月, 11月沒有提供課程	10月11日
	12月13日

上課時間：
上午9時30分至下午4時

課程費用：£60

如有興趣報讀或查詢此課程，請與Angela聯絡。

電話：0161 833 0377
電郵：angela_chick@waiyin.org.uk
地址：Wai Yin Society
66-68 Swan Street,
Manchester, M4 5JU

Wai Yin Society

Figure 74. Chinese community centre poster in Chinatown: Chinese, English

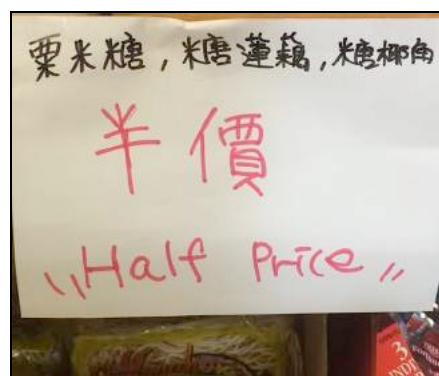


Figure 75. Chinese supermarket label in Chinatown: Chinese, English

This audience-exclusive character of monolingual texts in Manchester's Chinatown is made explicit in a handwritten notice, which offers information about the sale of a business (Figure 76).¹⁴ Starting off with the greeting “To Chinatown”, the monolingual Chinese text has clear symbolic values in addition to its communicative purpose. It defines the local meaning of the area, illustrating the sign-writer's subjective interpretation of and identification with Chinatown as an exclusively, authentic

¹⁴ Translation of Chinese text in Figure 76: “To Chinatown. Four rooms + a common room. Chip delivery. Revenue 1500 pounds per week. £160,000 selling.

Chinese space. The note expresses a sense of belonging, promoting a Chinese collective identity. It is a symbolic claim to ownership of Chinatown and only readers of Chinese become legitimate users of this demarcated space (cf. Blommaert 2013: 47).

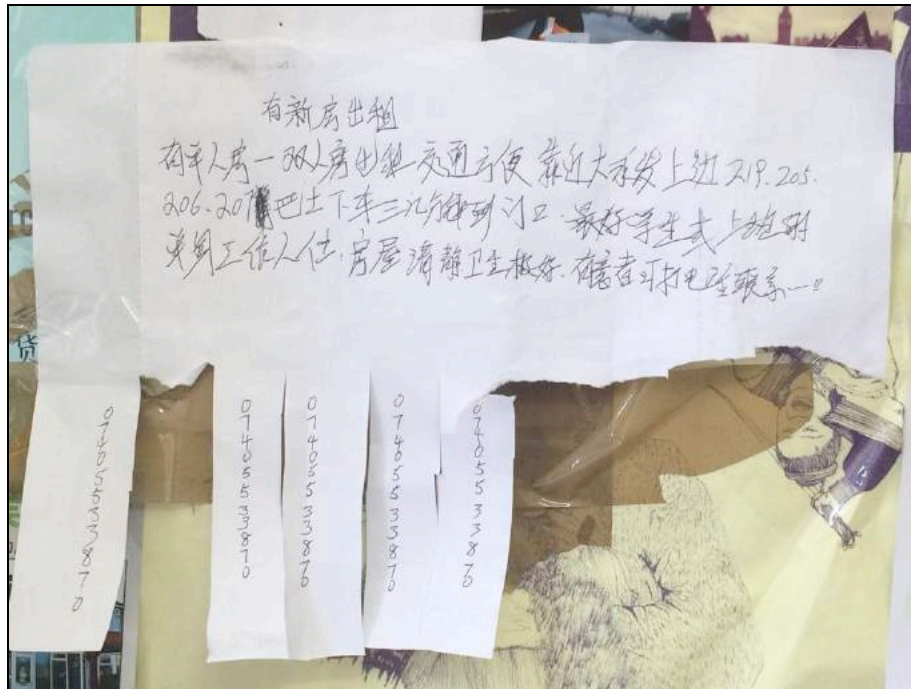


Figure 76. Handwritten notice on noticeboard in Chinatown: Chinese

Chinatown's noticeboards serve as a network of congregation. They inter-link community members, creating an exclusively Chinese place within a larger commodified space of imagined 'Chinese-ness': language choice reflects authentic community-internal interaction rather than performance of authenticity. Excluding non-Chinese readers from the readership, the texts implicitly challenge the visual and functional predominance of English in Manchester's LL. This in turn reflects and promotes community resilience and the community's aim to maintain its Chinese heritage. The different patterns of language use shape Chinatown's heterogeneous identity. The use of Chinese in Chinatown's LL has both outwards- and inwards-looking functions, which serve to structure space.

'New Chinatown': An emerging 'Chinese Space'

A second dense cluster of Chinese signs can be found on the northern edge of the city centre along Oldham Road, in the area which we designate here 'new Chinatown'. The area is home to a number of Chinese takeaways, minimarkets, beauty salons and other businesses that serve mainly the Chinese community. Like city-centre Chinatown, Oldham Road's LL is characterised by a dominance of Chinese and English, while other languages are largely absent. The only exceptions are one bilingual Japa-

nese-English sign, a Vietnamese-English sign, and a sign that uses Vietnamese in addition to Chinese and English.

As Figures 77 and 78 show, most of the Chinese signs along Oldham Road use the language for communicative purposes.



Figure 77. Chinese ‘communicative’ signs in ‘new Chinatown’

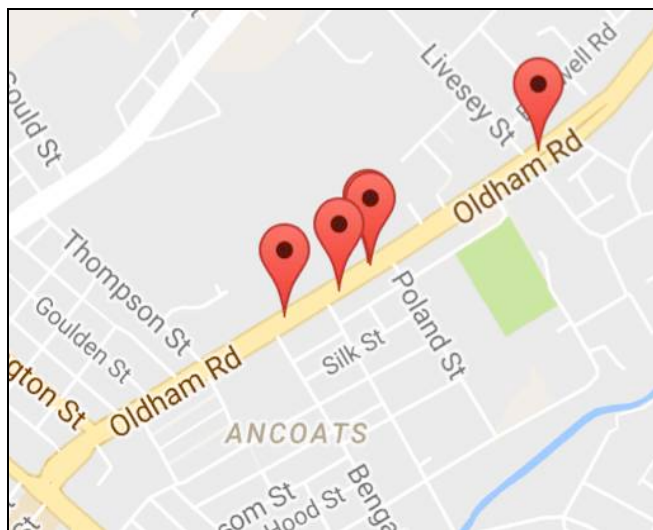


Figure 78. Chinese ‘emblematic’ signs in ‘new Chinatown’

Ad hoc monolingual Chinese notes convey information to the local Chinese-speaking community. The home-printed notice in Figure 79, for instance, informs members of Manchester Chinese Christian Church about changed opening times during a holiday break.

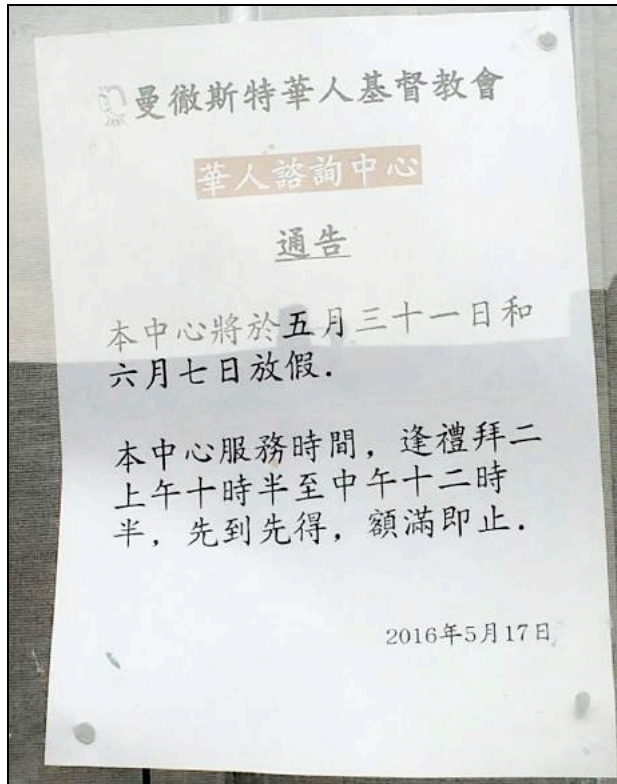


Figure 79. Chinese Christian Church notice in 'new Chinatown': Chinese

The local HSBC branch uses Chinese characters consistently and prominently on indoors- and outdoors signage (Figures 80; 81). Most staff, as we found out through our interviews, are proficient in English and Chinese, which mirrors their clients' language needs and justifies language choice in the LL. The functional purposes of Chinese on HSBC signs contrasts with the emblematic uses of Chinese by non-Chinese businesses in city-centre-Chinatown.



Figure 80. HSBC contact details in 'new Chinatown': English, Chinese



Figure 81. HSBC door signs in 'new Chinatown': English, Chinese

We found one single multilingual top-down LL-item in 'new Chinatown', namely a Chinese-English warning of thieves provided by Greater Manchester Police (Figure 82).



Figure 82. Greater Manchester Police poster in 'new Chinatown': English, Chinese

The Police warning sign, like the HSBC sign, indicates recognition of the presence of Chinese speakers in the area. However, unlike the City Council's contribution to the LL in city-centre Chinatown, this duplicating, informative top-down item uses Chinese specifically in order to reach the local Chinese-speaking community as well as Chinese-speaking visitors (such as friends and relatives of over 5,000 Chinese students who are enrolled in Manchester's universities). Thus, the signs are forms of responding to language needs in the area rather than to create a Chinese sense of space and emblematically recognise the presence of a Chinese community.

9 Inwards looking spatial demarcation: Manchester's Hebrew signage

Another example of purposeful linguistic demarcation of space is the clustering of Hebrew in North Manchester's LL. Hebrew is generally found in several clusters in North Manchester, between Higher Broughton and Prestwich, along the municipal boundary of Manchester and Salford. The use of Hebrew to demarcate space differs from the use of Chinese in use and function. While Chinese is used also for spoken communication among community members in Manchester, Hebrew is generally not used for oral communication in private or business settings in the city (with the exception of a relatively small number of recent immigrants from Israel). In the LL, Hebrew is normally connected with religious contexts, used on façades and inside synagogues and Jewish educational institutions. This ceremonial use is replicated in semi-private and private domains: Hebrew appears on the signs of Jewish-owned businesses that serve the community. Several outlets use the Hebrew word for 'kosher' (כָּשֵׁר) to signal that they conform to Jewish dietary law, expressing common fellowship to Jewish clientele. A gift shop uses the Hebrew translation for 'gifts' in addition to the visually dominant English text (Figure 83).



Figure 83. Shop sign Higher Broughton: English, Hebrew

The sign of a construction company uses English to advertise services, but informs readers in Hebrew that they “observe Sabbath”. This audience-specific message indicates compliance with Halachic regulations and thereby certifies the company as legitimate in the religious sense. Being monolingual Hebrew, the text automatically excludes a readership that would not embrace these values (Figure 84).



Figure 84. Construction company sign Higher Broughton: English, Hebrew

A business offering patient care displays their Hebrew name in both Roman and Hebrew script, in addition to English service information. Their desire to emphasise the company's Jewish background is echoed on their homepage, which advertises Jewish celebration events and includes soundbites from Rabbis, in English.

Unlike the functions of Chinese on commercial signage, the use of Hebrew is targeted towards in-group members of the community. This is however not due to community-based needs for translation, since Hebrew is not typically used for communication in everyday contexts in Manchester. Indeed, the signs use English rather than Hebrew for any practical information that potential customers would require. The inclusion of Hebrew in bottom-up signage serves primarily and perhaps even exclusively emblematic functions. It makes Jewish identity part of the local environment and selects fellow community members as addressees. The construction company's use of Hebrew (Figure 84) may be regarded as an attempt to negotiate a communicative value ascribed to Hebrew; after all, active knowledge of Hebrew is required in order to understand the content, which in turn conveys information that is likely to be vital in order to attract potential customers in this particular community. Nonetheless, the separate coding of community-internal information through a formulaic phrase is at the same time symbolic of the sign's function to flag shared identity values.

Such symbolic use of Hebrew in Manchester's LL can be found also in a residential area in Higher Broughton, where private homes show Hebrew nameplates on their doors (Figure 85). While the overall framing of the signs is Hebrew, as indicated on most of these signs by the syntax that adjoins that word 'family' with the family name, as well as the form of the word 'family' in the Hebrew Construct (possessive) State, the actual names tend to show the conventions of Yiddish orthography, with Hebrew characters representing vowels (thus שלעזינגער for 'Shlezinger', etc.). Once again we see a symbiosis of two languages, whereby Yiddish, the vernacular language

of the Orthodox Jewish community, incorporates Hebrew, the community's High code, and the two combine in the structured codification of the inwards-oriented symbolic presentation of, in this case, the family domain. The same convention is encountered on a number of signs that show Hebrew phrases, but use Yiddish orthographic conventions to spell 'Manchester' – representing the bridging of community-internal with the external, secular world. These nameplates all follow a similar layout, replicating the design typically used for plaques of Jewish religious and educational buildings. The Hebrew door signs do not serve any communicative function: neighbours do not need them, and the postman cannot read them. This is indicated by the consistent use of English for any information relevant to out-group audiences, such as the notice “no free newspapers” (see Figure 85).



Figure 85. Hebrew name signs at private doors in Higher Broughton

The emblematic functions of Hebrew are further illustrated by ‘welcome’-posters painted by children and attached to the front doors of homes in the Broughton and Prestwich areas (Figure 86 for an example). Hebrew is used in the nameplate and for the phatic ‘welcome’-message, while purchased notices like “baby boy” (1) and improvised messages like “no free newspapers” (2) are displayed in English.



Figure 86. Hebrew door signs at private door in Higher Broughton

A similar poster found in Higher Broughton is a rare example of written Yiddish in the public LL in Manchester. Again, Hebrew is used for the symbolic 'welcome'-message, while Yiddish serves for communication. The children's spontaneous use of Yiddish reflects its communicative functions for secular purposes in the private domain, mirroring the functional divide between the languages (see Figure 21).

The use of Hebrew in the LLs of these commercial and residential areas expresses the LL-actors' strong affiliation with their Jewish heritage. While Hebrew does not serve any informational purpose, it creates and reinforces a sense of community identity and excludes non-Hebrew readers. This collective expression of identity serves to claim ownership of the local neighbourhood and to demarcate space. It plays no role, however, in creating any sense of authenticity or in marketing either goods or services to outsiders, and is in that respect, unlike the use of Chinese in Chinatown, strictly inwards-oriented.

In stark contrast to the dense appearance of Hebrew signs on Jewish homes in a street in Higher Broughton, a neighbouring street is marked by the presence of Polish, and the complete absence of Hebrew, in the LL. Monolingual Polish notices

appear around a Polish shop and businesses advertise their services in Polish. Figure 87 illustrates how the high density of Hebrew signs (blue markers) defines a space that is clearly set apart from an area characterised by Polish signs (red markers). Although the communicative functions of Polish texts are different from the emblematic purposes of Hebrew, both contribute to structuring space.



Figure 87. Distribution of Hebrew and Polish signs in Higher Broughton

The consistency in signage produces “meanings that derive directly from the placement” (Scollon & Scollon 2003: 22). It defines two co-existing ethnic spaces, constructed as markedly different from each other. The juxtaposition of these sites represents negotiations over space, emphasising a contrast in identity and ideology (Bever 2010: 20). This affects also the passer-by’s identity, “from someone who belongs to a particular network or community, to someone who doesn’t belong” (Blommaert & Huang 2010: 12). Thus, the LL has the power to trigger a sense of inclusion/exclusion in the reader.

The use of Hebrew foregrounds Jewish values; yet, the Jewish community does not ascribe to a single, uniform identity. In Higher Broughton, we documented a banner erected to mark the occasion of HM Queen Elizabeth II’s ninetieth birthday (Figure 88). English is visually and functionally dominant, yet Hebrew is part of the congregation’s logo. This expresses a complex, trans-local identity, where Jewish identity interacts with British identity. The use of Hebrew is de-coupled from a strictly Jewish context and integrated into a local discourse. The Jewish community thereby expresses its identification with British institutions while establishing itself within the larger neighbourhood and thus marking its own space.



Figure 88. Hebrew Congregation sign in Higher Broughton: English, Hebrew

Inside community institutions such as synagogues and religious seminars, both Hebrew and Yiddish take on communicative functions, with posters and leaflets conveying religious messages and instructions on moral behaviour, advising on community events, as well as conveying various private messages (Figures 89; 90).



Figure 89. Trilingual sign advising to switch off mobile phones: English, Yiddish, Hebrew



Figure 90. Bilingual sign advising about the need to prevent talk during prayer times (Hebrew, top) and asking for volunteers to enforce that ban (Yiddish, bottom)

10 Emblems of cosmopolotan identity

In addition to using their ‘own’ language, sign writers expressively and explicitly cross language and community boundaries to embrace diverse readerships, both for communicative and emblematic purposes. LL-actors thereby exploit language repertoires for audience-inclusion and audience-selection. A restaurant on Claremont Road in Rusholme uses English for its name, opening hours, and the menu; the availability of a ‘family room’, a mixed-gender customer facility, is advertised in Somali and Arabic (Matras & Robertson 2015). A Kurdish travel agent uses trilingual signs to convey audience-specific information (Figure 91).



Figure 91. Travel agency sign in Rusholme: Kurdish, Arabic, English

The Sorani Kurdish text translates as “flight tickets from UK to Kurdistan and worldwide”. The Arabic text advertises “tickets from UK to the Middle East and worldwide”. The English part embraces both communities and so it reaches even wider audiences. Language choice is tailored to convey not just nuances but distinct sub-types of service, addressing distinct audiences.

Sign writers sometimes use languages that are not a part of their own repertoire for the purpose of marketing audience-specific services through audience selection. The outlet visible in Figure 92 uses a bilingual Arabic-English sign that displays its name in both Arabic and Roman script. A monolingual text in Arabic informs readers that it serves “all types of drinks”, referring to the fact that alcoholic drinks are available too. Two home-printed monolingual signs attached to the façade address international students who live in the neighbourhood: a Russian text advertises “free drinks for Uzbeks and Kazakhs”, while a Malay text says “free hot or cold drinks for Malaysians”. The language choice serves to attract the attention of target readers and

convey relevant information, offering evidence of the authors' awareness of the spatial clustering of languages in the area.



Figure 92. Fast food outlet façade in Rusholme: Arabic, English, Russian, Malay

The signage of a minimarket in Levenshulme shows a rather ‘unexpected language combination’, using Persian, Polish and English on its façade to advertise both Eastern European and Iranian products (Figure 93). In close vicinity, there is a second outlet that uses Persian and English to advertise a similar product range (Figure 94). From our interviews we know that the owners of both shops are Iranians, who are aware of the large presence of Persian and Polish speakers in the neighbourhood and aim to respond to their needs through a tailored product range as well as language choice. Such ‘unexpected’ language combinations offer evidence of an emerging civic identity, one that embraces the area’s diversity.



Figure 93. Iranian convenience store in Levenshulme: Persian, Polish



Figure 94. Iranian convenience store in Levenshulme: Persian

In other LL-items, the functions of language choice are closer to the emblematic rather than strictly communicative. Figure 95 shows a small business on Claremont Road in Rusholme, whose Somali sign above the shop window (“XAWAALADDA DAHABSHIIL”) indexes the shop-owners’ background. An additional sign next to the entrance welcomes customers in English, Somali, Arabic, and Urdu/Persian. While holding on to their linguistic identity, the shop owners embrace the diversity that characterises the neighbourhood. Again, language choice illustrates the LL-actors’ bottom-up appreciation of space and reflects the desire to adapt and reach out to an environment that is perceived as linguistically diverse. Interviews with shop staff have revealed that, while unaware of who had made the decision to include these languages, staff believed that passers-by were likely to be speakers of one of these languages. Triangulation of language datasets confirms this bottom-up understanding of spatial clustering (School Census 2015; GP interpreter requests 2014/2015; Census 2011). The sign challenges the conceptualisation of ‘languages’ as clearly separable: depending on the individual reader’s linguistic repertoire, the lower line may be perceived as Urdu or Persian, since the languages share a word for ‘welcome’. Sign writers thus capitalise on the cohabitation of language communities as well as on the ambiguity of linguistic elements to express audience-inclusiveness.



Figure 95. ‘Welcome’-sign on Claremont Road: Arabic, English, Somali, Urdu/Persian

A supermarket in Cheetham Hill takes an even more inclusive approach, using seven different languages (English, Polish, Somali, Amharic, Tigrinya, Hindi, Urdu/Persian) to demonstrate their reaching out to different groups who live in the area and are among the potential audience of customers (Figure 96). In neighbourhoods where not everyone shares a common language, such multilingual texts function as a cohesive force among its residents (cf. Huebner 2006: 50).



Figure 96. 'Welcome'-sign in Cheetham Hill: English, Polish, Somali, Amharic, Tigrinya, Hindi, Urdu/Persian

A city-centre-based taxi training school distributed multilingual posters in Rusholme, using English, Arabic, Urdu, Somali and Persian to advertise their services (Figure 97). It is an example of audience-inclusion through multilingual marketing, indicating the authors' solidarity with the different communities inhabiting the neighbourhood (Matras & Robertson 2015). Again, this confirms a bottom-up awareness of the spatial clustering of languages: The selected languages are among the top 10 languages for the area in the School Census (2015) and GP interpreter requests (2014/2015). It is however unlikely that the sign-writers consulted such formal datasets when creating the poster; more likely, language choice is based on an assessment of the neighbourhood's ethno-linguistic composition that is based on personal experience. As Huebner (2009) points out, the "LL is influenced in part by the agents' perceptions of the intended audience" (2009: 74). Language choice is highly local. The taxi school's website is monolingual English, the advertised courses and exams are in English, and there is no indication of language provisions for non-English speakers. The poster's language use is thus a symbolic gesture of empathy rather than an attempt to communicate information to non-English speakers. The taxi-company's poster is thus a statement of the sign-creators' appreciation of space, of neighbourhood boundaries, and of complex identity composition within those boundaries. It testifies to agents' conscious efforts to embrace a wider, one might say, 'locally-globalised' civic identity: one that entails consideration of the diversity by background of a population in a given, immediate locale.



Figure 97. Taxi school poster in Rusholme: English, Arabic, Urdu, Somali, Persian

In relation to *natural* rather than *linguistic* landscapes, Mitchell (2000: 100) argues that

Landscape is both a place and a ‘way of seeing’ [...]. It is additionally a form of ideology. It is a way of carefully selecting and representing the world so as to give it a particular meaning. Landscape is thus an important ingredient in constructing consent and identity.

This can be applied to language use on signs, by understanding LLs as subjective representations of space that foreground the LL actors’ subjective perceptions. Thus, signs can offer an insight into sign writers’ understanding of space as well as their appreciation of the complexity of identities that surround them.

A similar example is a food stall in Longsight that uses bilingual Urdu-English signs to advertise specialties such as Kashmiri tea and Kulfi ice-cream. In addition, the signage includes more than ten languages to welcome wider audiences (Figure 98). In conversations with staff members working at the stall, we were told that the languages were chosen to include the neighbourhood’s multilingual population. The staff we spoke to displayed a rather remarkable awareness of the individual languages, too, and were able to identify most of them, if not by actually reading them, then simply, apparently, by drawing on knowledge, transmitted within the outlet among staff members, on which languages had been included. The combination of multiple languages to embrace diverse groups of readers and the maintenance of awareness of these selected languages suggests that the sign writers’ perception of ‘community’ includes their entire clientele, i.e. the diverse neighbourhood.



Figure 98. Multilingual Food stall signage in Longsight: English, German, Polish, French, Malay, Bengali in Roman script, Hindi in Roman script, Urdu, Arabic, Persian, Pashto.

An indication of how various population segments become immersed in this flagging of a cosmopolitan, multilingual civic identity is the effort put by students to include translations into multiple languages on a banner in support of a candidate during the Students' Union election (Figure 99). Here, there is neither a communicative message nor even a direct emblematic attempt to reach out to particular target audiences. Instead, the mere inclusion of multilingual diversity has an aesthetic value in its own right irrespective of the choice of particular languages and the audience which they may, accidentally, engage. Multilingual identity thus becomes a badge that is intended to represent a particular set of values, competence, and trustworthiness.



Figure 99. Multilingual Students' Union elections banner (Chinese, Bengali, Spanish, Azeri, Turkish, German, Arabic, Hindi, Urdu, Japanese, Russian).

The inclusion of multiple languages occurs also in the voluntary sector (Figure 100). On the welcome sign of a Church of England centre in Chorlton, different languages serve emblematic rather than communicative purposes, flagging a “friendly and welcoming” stance towards the city’s linguistically diverse population. Blommaert (2013) notes that, although churches typically draw most of their followers from their ‘own’ community, some identify themselves as ecumenical “by means of the choice of language in communicating with the public” (Blommaert 2013: 100).



Figure 100. Church ‘Welcome’-sign in Chorlton: English, Urdu/Persian, Pashto, Hindi, Arabic

Again, the ambiguity of Persian and Urdu transcends what is typically perceived as ‘language boundaries’. That boundaries between ‘languages’ are not unambiguous is supported by on-site interviews with sign-writers during fieldwork: Multilingual speakers do not always insist on rigid language distinctions. For instance, Kurdish speakers who also know Arabic did not insist on disambiguating portions of signs that could serve either language.

Multilingual signs and signs that capitalise on the ambiguity of ‘languages’ serve as a gesture of inclusion (cf. Spolsky & Cooper 1991). While not always used for strictly communicative purposes, multilingual texts maximise the group of potential addressees. This recognition of their multi-layered surroundings constitutes a response to Manchester’s superdiversity. Sign writers are aware that language diversity is a precious resource for marketing. They reflect on the ethnic and linguistic make-up of their neighbourhoods and invest resources in shaping their signs. This, in turn, promotes the area’s multilingual character and contributes to shaping a particular perception of place. As pointed out by Matras & Robertson (2015: 297), the LL expresses an emerging new civic identity “that ‘brands’ multiculturalism and embraces outreach and superdiversity”. This civic identity encompasses the multiple, cohabiting groups. Although individual communities claim ownership over parts of space, sharing the

local neighbourhood creates links between communities, connects individuals across 'community boundaries', and encourages collective identification with a superdiverse place. Combining multiple languages on individual signs, LL-actors create a fixed local space while reaching out to diverse 'communities'. This raises questions about the understanding of 'community' in a superdiverse setting such as Manchester, an issue to which we shall return in the concluding remarks.

11 Multi-site networking and Interdiscursive Dialogicality

In addition to spatial clustering and spatial demarcation, a further way of organising space through language is the construction and promotion of community networks. Sign writers use the LL to actively link with fellow community members, strengthening community bonds and creating a sense of place. Such multi-site networking takes on a number of different forms.

First, LL-actors put up their signs in different outlets in the neighbourhood, which inter-connects these places. A Kurdish cargo agent, whose outlet is based in Rusholme, put up posters in the nearby area. Figure 101 shows all Kurdish bottom-up signs in the neighbourhood, and Figure 102 shows the distribution of the cargo agent's posters. The trilingual Sorani-Arabic-English texts contribute to creating a sense of place and define the area frequented by community members. Given the rather modest overall extent of Kurdish signage in the city, by comparison, the contribution of just one individual commercial company to defining space by distributing its signs carries significant weight. In the bottom-up reality of the globalised city, actors take ownership over spatial definitions and are in a position to influence the perception of space and belonging independently of institutional decision-making processes or centralised policy and planning measures.

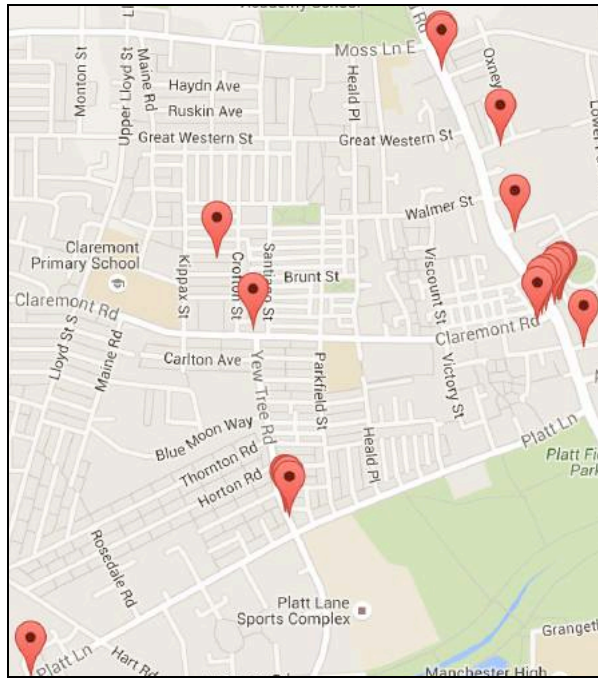


Figure 101. Distribution of Kurdish 'private' signs in Rusholme

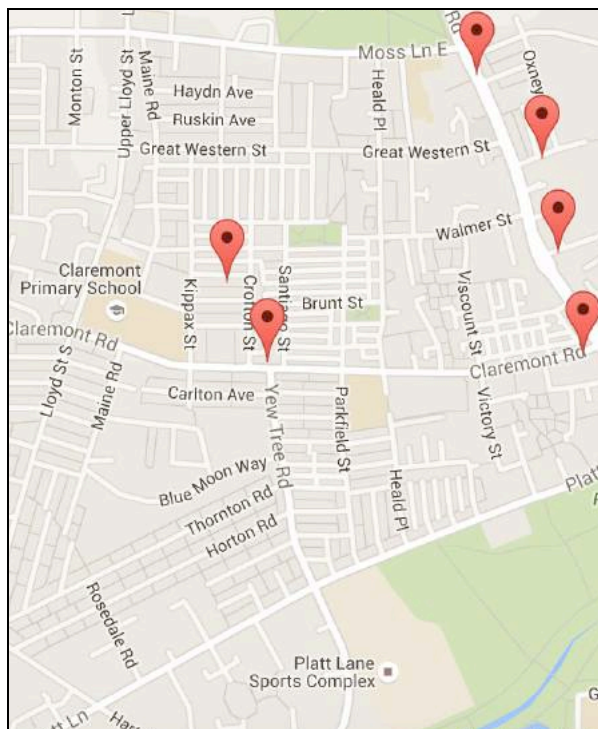


Figure 102. Distribution of Kurdish cargo agent's posters Rusholme

Similarly, a Pakistani mortgage company posted their English-Urdu sign in several, also Pakistani-owned outlets in Levenshulme. The poster (Figure 103) addresses the Pakistani community through the visually prominent use of Urdu. The language-content relationship indicates that the languages have different purposes,

and that it is English rather than Urdu that serves for communication. The Urdu text is a transliteration of the English word *mortgage*. Unless readers understand English, they will not be able to access any detailed information about the services. However, the Urdu script serves emblematic functions: it situates sign authors in relation to passers-by, and singles out Pakistani readers, creating an in-group discourse and forming group-related identities. In the distribution of the poster (Figure 104), the sign-writers targeted places that use Urdu on their signs, thus remaining within and promoting existing community circles as well as recognised spatial boundaries. In this way, the posters create and reinforce a spatial network of communication. They inter-link community members and businesses, which eventually creates a sense of place and demarcates space.



Figure 103. Guaranteed Mortgages, Urdu ('mortgage')



Figure 104. Distribution of poster shown in Figure 103.

Spatial networks can also be established across neighbourhoods. A Chinese accountants company based in ‘new Chinatown’ distributed bilingual English-Chinese posters locally, in city-centre-Chinatown and in a Chinese supermarket near the University (Figure 105). The complementary multilingual text (Figure 106) presupposes a readership that is proficient in both Chinese and English. The areas chosen to post the advertisements are frequented by Chinese speakers, who are also the intended readers. The distribution of the posters promotes spatial networks, symbolically interlinking ‘Chinese places’ that are located within a larger, highly diverse space.

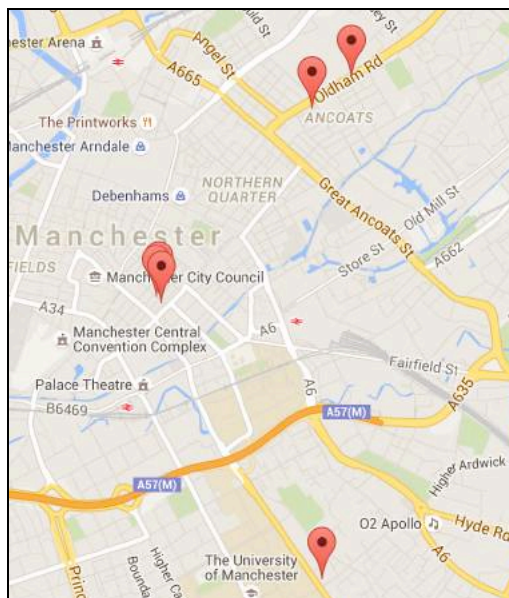


Figure 105. Distribution of J&P Accountants signage



Figure 106. J&P Accountants poster Chinatown: Chinese, English

The reciprocal dynamics of co-existing signs are characterised by an inter-semiotic and inter-discursive relationship, which forms new layers of meaning (Scollon & Scollon 2003; cf. Stroud & Mpendukana 2009). The co-presence of the same signs produces a kind of inter-discursive dialogicality “so that each takes part of its meaning from the co-presence of the other” (Scollon & Scollon 2003:193).

Another type of community-internal networking is cross-referencing between outlets. Bilingual Persian-English posters, which advertise the performance of an Iranian comedy play in Stockport, are attached to the façade of a Persian rug gallery in Levenshulme (Figure 107). The poster indicates that tickets can be purchased in a few outlets in Levenshulme, Withington, Cheetham Hill and Stockport. We were able to confirm that these outlets are owned by Iranians and frequented by fellow community members. The poster illustrates the comedy group’s entrenchment in the local community and reflects the existence of trans-local social networks that reach beyond neighbourhood and indeed city boundaries. By cross-referencing, the poster inter-links the businesses involved and maintains community-internal communication networks. This mirrors a solid, self-confident community that is strong and large enough to organise a community event in Persian.



Figure 107. Iranian event advertisement poster Levenshulme: Persian-English

Defining space through networking does not necessarily occur within (what is typically perceived as) 'community boundaries', or over distances. A Hungarian-owned shop in Fallowfield uses Hungarian on their signage; in addition, clients have put up Hungarian notices to advertise housekeeping services (Figure 108).



Figure 108. Hungarian signs on shop façade and indoors

This space is shared with other Eastern European customers, who have put up bilingual Polish-English and Czech-English notices to advertise similar services. These LL-items address fellow community members through the use of their own languages, while reaching out to the shop's larger customer base through English. LL-actors from different language communities affirm a shared group identity by using a shared space. At the same time, 'holding' on to their 'own' languages foregrounds individual identities and community-internal networks. Language use in the LL thus visualises the "highly intricate web of relationships between the various infrastructures of the

area” and between cultural groups (Blommaert 2013: 88; 2014: 448). This subdivides the larger place into smaller ones, contributing to the semiotisation of space.

Another type of a city-wide network is created through uniform multilingual signage used by butchers across the city. The default choice of signage for halal butchers seems to be Arabic, Urdu, and on some signs Somali, along with English. A butcher in Whalley Range for instance uses Somali in combination with Arabic and Urdu to inform readers that their meat is halal (Figure 109). Considering that Somali is not widely spoken in the neighbourhood, it appears that the sign reflects the default choice of a central supplier of butcher signs rather than the intended readers’ language needs (the shop owners are Urdu speakers).



Figure 109. Butcher sign Whalley Range: Somali, Arabic, Urdu, English

Reflecting multi-site networks in various ways, language use in Manchester’s LL thus marks spatial relations that are less obvious: multi-site networking is an indication of emerging multilingual civic identities brought together by the shared experience of being ‘diaspora’ communities in the city.

12 Top-down multilingual signage

Language use in Manchester’s top-down LL differs from that of cities in certain districts or regions in Wales, Belgium, or Canada, where bilingual public signage reflects official recognition of languages and is often regulated by explicitly formulated policy and legislation. In the globalised city, whose governance structures and overall sense of identity are still dominated by a traditionally monolingual majority, institutional language practices are generally de-centralised and responsive to local and changing assessments of needs, priorities, and resources (cf. Matras & Robertson 2015). This is

reflected, for example, in the way in which key public service providers such as hospitals and GP surgeries respond to the need for interpretation and translation services (Gaiser & Matras 2016).

More than one third of the 'top-down' or public sector multilingual signs surveyed in our study related to the health care sector. NHS England provides information leaflets and posters in a range of community languages, which can be requested by individual practices based on their perceived needs (cf. Gaiser & Matras 2016: 71). The language most frequently used is Urdu, followed by Bengali and Gujarati. We have also found a small number of posters in Chinese and Polish. Hindi is used on several information leaflets and posters, despite the rather small presence of Hindi speakers in the city and the relatively modest demand for interpretation for Hindi in Manchester GP practices; only 10 GP interpreter requests for Hindi are recorded for the period between March 2014 and February 2015. On the other hand, there is hardly any presence of Arabic signs in medical settings, despite the very strong demand for interpreter requests; Arabic is the most frequently requested language in Manchester GP surgeries, with more than 1,828 recorded requests between March 2014 and February 2015 (cf. Gaiser & Matras 2016: 47).

This seems to us to be an indication of the rather slow pace of response on the part of the health care system at national level to demographic changes and to changes in language needs when it comes to the production of such printed materials. This in turn highlights differences between the decision making process at local level, where there is, by contrast, a rather rapid response and flexibility when it comes to the procurement and provision of interpretation services for clinical care, and the centralised administration at national level, which is responsible for the production and dissemination of printed information materials.

As a result of this gap, we generally do not encounter language provisions through 'top-down' signage that are based on a local assessment of language needs. A medical practice in Cheetham Hill is a notable exception. Outdoor signage, posters put up indoors, and patient forms for repeat prescription are provided in languages that are strongly represented in the area, mainly Urdu. Handwritten Urdu additions to English texts reflect staff's awareness of a significant presence of Urdu speakers, as well as staff's own language skills. No doubt, these two are intertwined, and so the presence of Urdu signage in the clinic can be taken to represent yet another way of demarcating and claiming ownership of space, as the clinic flags its own embedding into the local community through its display of Urdu signs.

While we have been unable to identify any consistent pattern of multilingual signage in the health care sector, multilingual leaflets, produced and distributed by NHS England, are often displayed in pharmacies in Manchester's more diverse areas. We have found posters in Urdu and Bengali in a pharmacy in Rusholme, leaflets in Arabic, Bengali, Marathi and Tamil in a Longsight pharmacy, and multilingual leaflets that convey information in Arabic, Hindi, Gujarati and Urdu in a pharmacy in Cheetham Hill. Multilingual information material can also be found in some waiting areas and public passages at Central Manchester hospitals. Many GP surgeries now have a multilingual touch-screen portal enabling patients to register for their ap-

pointments (Figure 110). Chorlton Health Centre uses four languages in addition to English (Urdu, Somali, Panjabi, Polish) on a Welcome sign, which can be seen as an emblematic gesture of inclusion; but it recently also displayed a multilingual notice in search of support workers (Figure 111).



Figure 110. Multilingual touch-screen portal, Chorlton Health Centre: Greek, French, Albanian, Hindi, Chinese, Turkish, Spanish, Urdu, Polish.

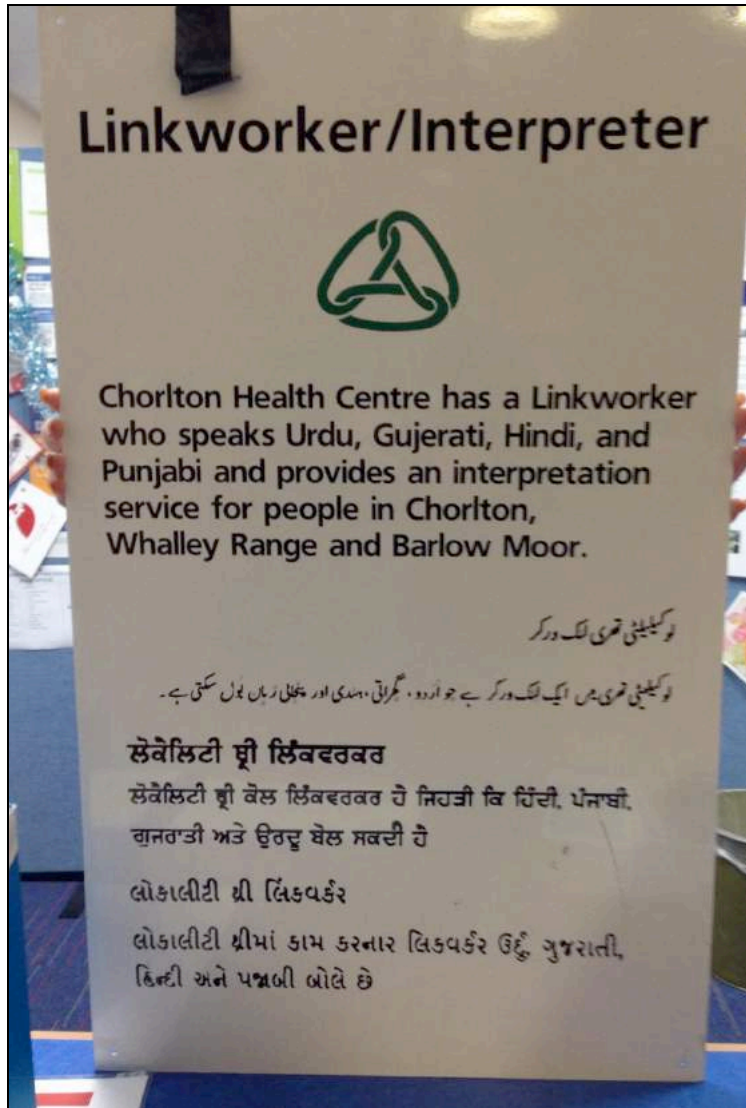


Figure 111. Linkworker sign Chorlton Health Centre: English, Urdu, Hindi, Gujarati

Multilingual signs that are put up by the local authority often address issues of public safety, though their presence is local and they clearly do not form part of a consistent pattern of applying any set language portfolio. In a number of public parks in south Manchester we found multilingual signs put up by the City Council that advise visitors “not to feed the pigeons”: We found such Urdu-English signs in Ladybarn and Whalley Range, Urdu-Arabic signs in Victoria Park, an English-Bengali-Urdu sign in Longsight (Figure 112), signage in Fallowfield’s Plattfields Park in Arabic, Bengali, French, Malay, Turkish, Polish, Spanish, and Urdu, and a warning sign in English-Arabic-Urdu advising on a penalty for dropping food at Manley Park in Whalley Range (Figure 113).



Figure 112. Bird feeding information Longsight: English, Bengali, Urdu



Figure 113. Penalty for dropping food Manley Park: English, Arabic, Urdu

While these are isolated examples, we did encounter two areas of the city in which Urdu, Manchester's largest community language, comes close to acquiring a status as a semi-official language in the local authority's public communications. The first of those areas is a zone on the border of Whalley Range and Chorlton. There is a cluster of private or bottom-up shop signs in Urdu around Manley Park in Whalley Range (Figure 114).

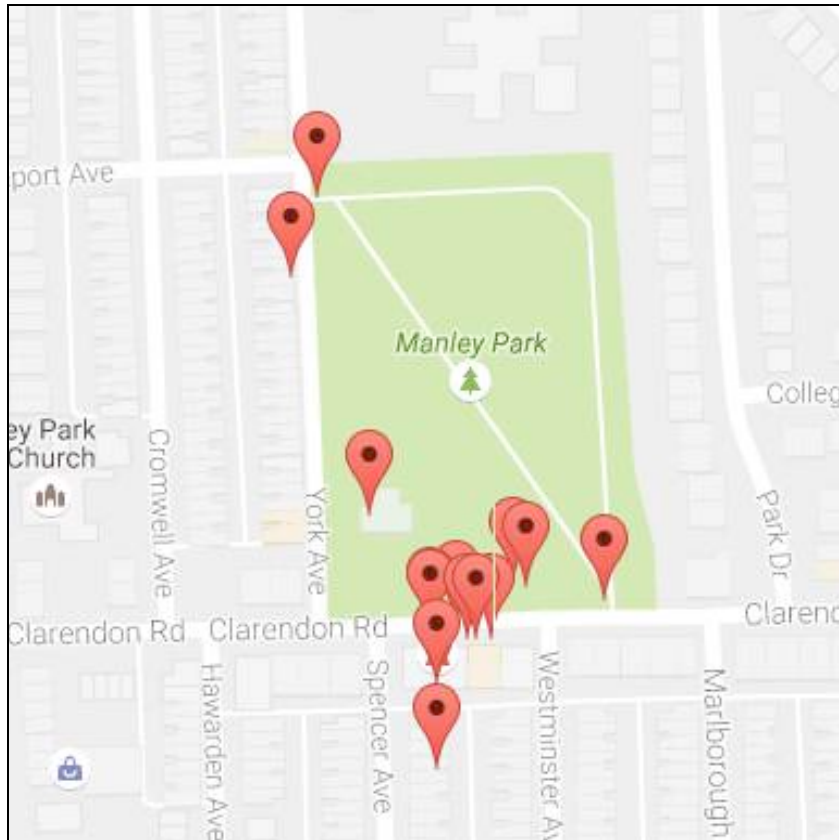


Figure 114. Distribution of Urdu 'private' signs Manley Park, Whalley Range

Aligned with this local display of linguistic 'ownership' are bilingual English-Urdu City Council signs at each of the entrances to Manley Park, a sign advising on penalties for waste dropping, referred to above, as well as temporary City Council notices with handwritten Urdu translations (Figure 115).



Figure 115. Temporary City Council notice Manley Park: English, Urdu

Just a short distance away from Manley Park, on the high street of Chorlton, we captured Urdu signs marking the reception at the entrance to local City Council offices (Figure 116) and an Urdu sign marking the entrance and opening hours of the local library, also run by the City Council (Figure 117).



Figure 116. Chorlton Council offices reception: English, Urdu



Figure 117. Chorlton library entrance signage: Urdu, partly covered by English sign

Both these signs have since been removed. The City Council offices in Chorlton have since been closed. The Library sign had already been covered by an English-only information poster on opening times (see Figure 117), and the historical plaque that contained the Urdu schedule had, at the time of writing, been removed completely from the building's façade (possibly just temporarily). These developments shed light on an interesting cycle in the LL presence in the area. Around 30% of residents of Whalley Range are of Asian background, and the ward has been represented by at least one councillor of Asian background since 2004. The public signs in Urdu in Manley Park and the nearby Chorlton high street represent probably the earliest official public acknowledgement of this kind of the presence of an Asian population in the area. The withdrawal of the signs from Chorlton is connected more to the current downsizing of City Council services rather than to a change in language policy or in the area's demographics. But the fact that Urdu signs had been erected in the first place is an indication of a local convergence of public statements to bottom-up trends,

and shows again that language policy in Manchester is responsive rather than legislative-prescriptive.

In Cheetham Hill, where nearly 40% of residents are of Asian background and an Asian councillor has been representing the ward since 1999, we see a similar convergence from the City Council to bottom-up tendencies toward ethnic-linguistic demarcation of space. Here, Urdu-English public signs erected by the City Council on various street corners (Figure 118) and alleyways (Figure 119) advise residents on penalties against littering. They join semi-official English-Urdu signs in local pharmacies (Figure 120). Together, they lend official, top-down recognition to and, in a sense, compliance with the trend in local businesses on the Cheetham Hill high street to advertise services in Urdu.



Figure 118. City Council sign street corner Cheetham Hill: English, Urdu



Figure 119. City Council sign alleyway Cheetham Hill: English, Urdu



Figure 120. Semi-official pharmacy sign Cheetham Hill: English, Urdu

The cases of Whalley Range/Chorlton and Cheetham Hill provide us with an insight into the dynamics of ‘de facto language planning’ in a city that, in fact, lacks an explicitly formulated language policy. The emphasis on waste management and safety issues in the local authority’s multilingual signage conveys the sense of priority given by the local authority to the link between rule-governed behaviour and community cohesion: By ensuring that rules are communicated to the entire population, the City Council is making a statement that it does not wish to see different behaviour patterns

giving rise to cultural tensions among groups of residents of different backgrounds. This deployment of language policy is strategic-functional as much as it is symbolic. By contrast, the use of Urdu for landmarks as well as for recruitment information (on opening times) can be regarded as a gesture of recognition of the area's, and thereby the city's, ethnic diversity, and as a way of signalling to local ethnic minority residents that the City Council represents them as much as it represents the English-speaking majority. We might describe this process as a symbolic two-way appropriation through linguistic signage: The local authority actively engages in the LL in order to prompt ethnic minority residents to embrace prevailing norms of behaviour, while at the same time signalling to those residents that it is responsive to their interests and needs.

This trend continues to be applied to the languages of new arrival populations. Sometime in 2015, a sign displaying angling regulations in a number of Eastern European languages (Polish, Lithuanian, Slovak, Romanian and Bulgarian) was erected by the Environmental Authority in a local park in Chorlton (Figure 121). It appears that the authorities were alerted to a growing presence of residents of Eastern European background who visited the park and were reported not to be aware of these regulations. Here, once again, a local authority engages in the LL in order to reinforce its contracts with targeted groups of residents. We found similar signs with translations into Eastern European languages advising about feeding ducks in other parks in Manchester.

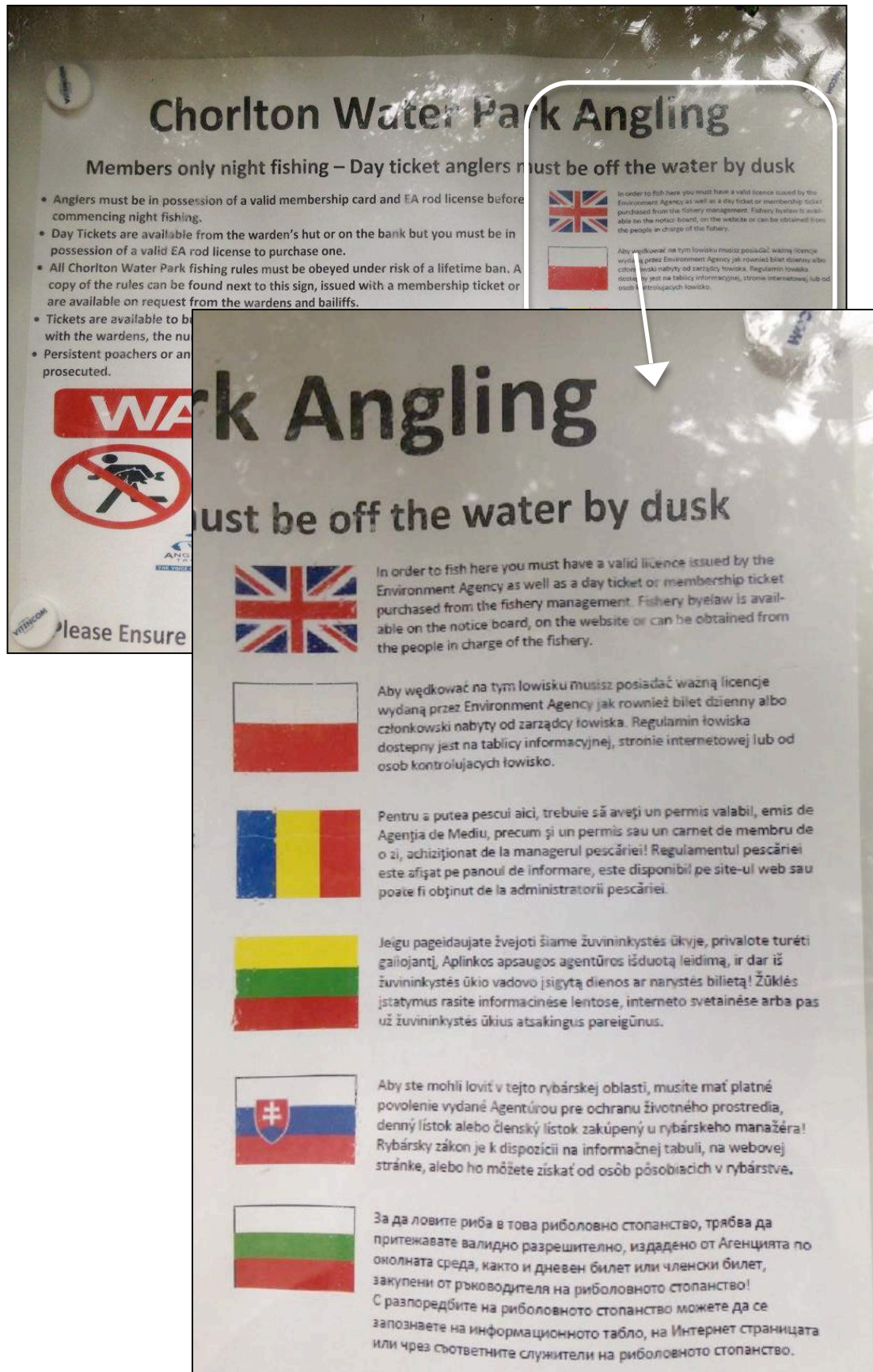


Figure 121. Information on angling regulations in Chorlton: English, Polish, Romanian, Lithuanian, Slovak, Bulgarian

We should note here that Manchester City Council does, in fact, have a regulated process for communicating about services in different languages. However, this process needs to be actively triggered by individual residents through direct request to the City Council's Translations and Interpretation Unit "M-Four". Much of the City Council's correspondence with residents, such as information about council tax payments or waste management, is accompanied by a multilingual leaflet (usually printed on the final page of the relevant publication) which points residents to a telephone number through which they can request either an explanation or sometimes a written translation of the service information. This measure allows the local authority to maintain a policy whose goal is in the first instance to ensure equal access to information and services rather than to promote or flag linguistic heritage, in a manner that is strictly responsive and thereby cost-effective.

Multilingual public signage is thus the exception, rather than the rule in City Council language provisions. In the city centre, we found only a handful of bilingual City Council signs, all of which point to local landmarks, including a Chinese religious institution (English-Chinese) and the Manchester Islamic Centre (English-Arabic). The signs are audience-specific, addressing communities for whom these institutions are of particular importance. Yet rather than convey essential communicative information, language choice here seems to be motivated by a wish to flag recognition of these communities' cultural traditions and thereby of their belonging to the city. Arguably, this serves, at the same time, to flag the city's overall cosmopolitan character and allows it to benefit from what some have called the "diversity dividend" (Syrett & Sepulveda 2011) – the opportunity to capitalise on multiculturalism in order to gain an advantage in international investment and global outreach for business development. The branding of inclusiveness in public spaces is argued to be a quintessential feature of Manchester's targeted effort to cultivate diversity for the benefit of economic growth (cf. Young, Diep & Drabble 2006).

The practice is replicated across various sectors: A Chorlton police station, which was closed in 2011, displayed a notice on opening hours in nine languages in addition to English (Hindi, Somali, Urdu, Bengali, Gujarati, Chinese, Arabic, Vietnamese, Panjabi). In the entrance hall to Manchester's Piccadilly train station, a text welcoming readers to the Metrolink tram service and informing them that tickets must be purchased before boarding the train is provided in Chinese, French, German, Polish and Spanish, alongside English. Although these signs do carry informational value, they seem to serve primarily symbolic functions of welcoming international visitors to the city. The choice of these global languages does not directly reflect Manchester's linguistic composition. The signs express an international appeal and serve as an emblematic gesture of openness toward visitors and the city's student population, most of whom are probably able to understand the English version of the text. (This impression is reinforced by Metrolink's monolingual homepage, which does not offer any information in languages other than English).

Manchester Airport, a public and private sector partnership, has a number of signs that use community languages. Alongside the ubiquitous 'Welcome' banners, there are also multilingual information posters on customs and border control, and

bilingual English-Urdu texts that explain how to use airport trolleys (Figure 122). The exclusive presence of Urdu on these signs, which were put up sometime after 2013, indicates that they do not target visitors or tourists, nor do they represent an attempt to embrace the actual, documented diversity of the city's principal language groups (as did, for example, the Chorlton Police). It seems that due to the size of the Asian population, the community's established history in Manchester and its strong presence in local institutions including political institutions, Urdu has gained a perceived status as Manchester's second language. In this way, it may be argued that Urdu has acquired a somewhat tokenistic role as the *quasi*-official symbol of Manchester's language diversity.



Figure 122. Trolley pay station Manchester airport: English, Urdu

In 2016, Manchester Airport introduced signs in various languages that inform travelers about security checks, accompanied by images (see Figures 123 and 124 for examples). From conversations with airport staff, we learned that the signs were a response to concerns about delays partly caused by passengers who were unable to read the English information on hand luggage restrictions. We were told that the language

choice was made based on the destinations of the airlines flying from the respective terminal. Indeed, at the time of writing, we found Polish, German, and French in Terminal 3, which tends to serve UK and European destinations, while Turkish, Hindi and Arabic were only found in Terminal 1, which covers destinations in the Middle East and Asia. Signs in Urdu and Chinese were found in both. Terminal 2 caters mainly for charter flights to holiday destinations, and we found no multilingual signs there.



Figure 123. Airport safety information: Turkish



Figure 124. Airport safety information: Hindi

The sign in Figure 125 addresses international students from Pakistan, China and Arabic speaking countries, apparently in an effort to guide them towards the airport's public transport terminal. The presence of international students in the city is an important contributor both to the income of the institutions at which they study, and to the local economy. It is not unreasonable for agencies to combine efforts to make the arrival of these students as smooth as possible; it is however doubtful whether the Urdu, Chinese and Arabic translations of English texts are really required by these particular target audiences. More likely, the sign's purpose is to draw attention and to give the new arrivals acknowledgement and recognition.



Figure 125. Airport banner targeting international students: Urdu, Chinese, Arabic

Chinese is used alongside English on the branding posters of “Airport City Manchester” (Figure 126), an emerging project to set up an international business park at Manchester airport. The city is endeavouring to attract large-scale investment specifically from China for this project, but it is also flagging the Chinese connection as a way of asserting the project's overall global outreach. Here, too, multilingualism is

used to help brand the city's cosmopolitan image as a way of strengthening its potential for growth and development.



Figure 126. Airport banner “Airport city Manchester”: Urdu, Chinese, Arabic

At Manchester airport, we have also found bilingual banners that use Arabic or Urdu, alongside English, to convey information possibly relevant to passengers travelling on the Hajj pilgrimage (Figures 127; 128). Language choice singles out particular audiences, and serves as a gesture of recognition of and openness towards Manchester's multicultural and multilingual population.



Figure 127. Airport banner Hajj information: Arabic, English



Figure 128. Airport banner Hajj information: Urdu, English

Still missing from our dataset, and needed in order to complete the picture, is a more exhaustive survey of the distribution across various agencies in the city of multilingual posters and leaflets issued by central government. The Foreign and Commonwealth Office and the Home Office, for example, jointly produced a series of posters and leaflets targeting forced marriage, which are available for download on a government website¹⁵ (at the time of writing) in English, Arabic, Bengali, Hindi, Pashto, Punjabi, Somali, Turkish, and Urdu (as well as, in compliance with the Welsh Language Act, in a bilingual English-Welsh version). Printed versions have been widely distributed to secondary schools in areas with a population of Middle Eastern, African and South Asian background, and we have seen such posters on display.

There are logistical and sometimes also ethical impediments to an effective and exhaustive survey of such printed material – including the very scale of the task, and the need to obtain access and permission. *LinguaSnapp* is an effective tool for this purpose, allowing us to delegate the documentation task to members of these institutions, or to capture images spontaneously when the opportunity arises. In this way, we have collected images of leaflets and posters from public institutions such as libraries. A more targeted and comprehensive analysis of such materials may help explore the contribution of top-down central government initiatives to shaping the more mobile, localised and temporary aspects of the LLs in an urban setting where the more permanent, public display of LLs is generally a bottom-up initiative.

Overall, the discussion in this section allows us to propose a tentative functional configuration of the role of top-down, public sector initiatives in the city's multilingual signage (Figure 129). Various agencies can use LL to convey information to a variety of target audiences, using a variety of prompts, for different purposes, and drawing on a variety of communicative processes. The City Council's involvement in multilingual LL follows a three-tier approach, a) targeting residents of specific neighbourhoods with messages the purpose of which is largely regulatory, b) making use of signs in outlets like local libraries for core service information such as opening times, and c) using leaflets to offer residents the opportunity to obtain access to translations on an individual basis upon request. The health care sector engages with the LL primarily in order to facilitate access to service in the wider sense (including general information about illness prevention and treatment and well-being), while the airport authority's engagement is mainly regulatory of customers' behaviour. All agencies also utilise, to varying degrees, multilingual signs as a gesture of inclusion or for branding purposes. Finally, some of the city's institutions act as mediators for central government communications that are issue-specific, by displaying and distributing posters and leaflets produced by various government departments (including NHS England).

¹⁵ <https://www.gov.uk/guidance/forced-marriage>

Agency	Target audience	Prompt	Purpose	Communicative process
City council	Neighbourhood collective	Public sign	Regulatory/ waste management, public health & safety	Unsolicited exposure
City council	Client/customer collective	Outlet sign	Outlet-specific, core service information	Retrievable/ presented
City council	Private individual	Leaflet	Access to service information	Personal request
Health care	Client/customer collective	Outlet sign/leaflet	Access to service information	Retrievable/ presented
Airport	Client/customer collective	Outlet sign	Regulatory/ security	Unsolicited exposure
Various	Client/customer collective	Outlet sign	Gesture, branding	Unsolicited exposure
Central government	Issue-specific	Poster/leaflet	Risk management	Mediated

Figure 129: Functional configuration of Manchester's top-down multilingual signage

13 Discussion

Linguistic demarcations segment and structure Manchester's public space. Larger space is subdivided into smaller places, where particular "forms of normativity" and expectations regarding language choice prevail (cf. Blommaert 2010). In this paper we have shown that language signs have the symbolic power to negotiate collective and individual identity, to create and maintain social networks, and thereby to construct place. The linguistic make-up of Manchester's bottom-up LL reflects, by and large, the city's demographics; it mirrors settlement patterns; and for some languages it may also reflect certain aspects of their vitality in the local community.

Language use in the LL is a central mechanism through which spaces are structured and shaped into places, as semiotic resources are “deployed iteratively in a visible manner that contributes to constructing particular social realities” (Hult 2014: 509). Language signs serve to organise space and social relations in different ways, and for different purposes. Language consistency in signage serves to assert ownership of place, which subdivides space. Some languages, like Somali, Sorani Kurdish, and Thai, are concentrated in a few streets and are barely visible outside these clusters. Spatial clustering in the LL gives these languages local status. By contrast, the concentrated use of Hebrew and Chinese are examples of purposeful spatial demarcation, where languages and scripts are employed in order to define the identity of place and to create a contrast to neighbouring spaces.

Language use in the LL thus demarcates *areas*, as well as *audiences* (cf. Blommaert & Huang 2010). We have shown how various forms of audience-inclusiveness and exclusiveness structure space socially and affect how space is perceived and experienced. Chinese in Manchester's LL is inwards- as well as outwards-oriented. The language is used both for community-internal interaction, and as part of a marketing strategy targeted towards out-group members. The spatial clustering of audience-exclusive signs – within city-centre Chinatown and in the form of ‘new Chinatown’ – creates an ‘authentic Chinese place’ within a larger space of ‘commodified Chineseness’. By contrast, Urdu, Somali and Bengali, among others, are used to market audience-specific products and services, conveying information to fellow community members. Panjabi is actively used as a means of communication in community settings, but hardly present in the public space. Hebrew, on the other hand, is used in the outdoor, public space primarily for emblematic purposes: The signs are oriented towards community values and show no outwards-reaching focus. Private signs replicate the ceremonial use of Hebrew in the voluntary sector, represented by religious and educational institutions and literacy, which amounts to an overt expression of the all-encompassing regulatory role that such institutions have in the daily lives of Orthodox Jews in north Manchester. This assertion of a Jewish identity through language use has a demarcating effect, as it serves to define in-group and out-group membership. Inclusion or exclusion is reader-dependent: The reading of a sign is based on one's knowledge, experiences, and goals, which positions social actors either within or outside a communication network.

Spatial relations between signs, or between sign writers and readers, create meaning. Patterns of social interaction are reflected in and promoted through the distribution of signs and through cross-referencing to other businesses, from which sign owners benefit economically. Individual signs thereby link spaces, mirroring LL-writers' movement across space and their expectations of intended readers' use of space. This shows the inter-textual meaning potential of individual texts, which become re-contextualised when interpreted in dialogue with co-existing signs (Scollon & Scollon 2003). In effect, then, these cross-references create spatial networks that transcend individual locations.

Linguistic demarcation expresses, contests and negotiates identities. Using their ‘own’ language, sign writers show alignment to their community, contribute to

the vitality of social networks, and promote socio-economic and cultural community resilience. In the case of Arabic, for instance, long-standing immigrants who have already established their businesses and acquired English use Arabic to help recently-arrived individuals adjust to their new environment.

At the same time, sign writers re-adjust and re-assert identities in interaction with their surroundings. Multilingual bottom-up texts offer evidence of polycentric identity formation (Blommaert 2013, 2010), indicating that individuals are oriented toward multiple and potentially competing norms. In this way language use in the LL offers insights into the growing complexities and dynamics of people's linguistic repertoires and cultural practices that characterise superdiversity (Arnaut et al. 2016): Sign writers reach out to wider audiences by embracing the neighbourhood's complex linguistic composition. LL-actors expressively and explicitly cross language boundaries by using 'other' languages. Their creative compositions may result in ambiguity of language choice, mirroring the permeability of language boundaries. Exploiting the ambiguity of individual, discrete linguistic representations such as words or characters is another way of transcending boundaries. This process of reaching out may serve to communicate reader-specific content, or it may constitute a tokenistic gesture. In either case, multilingual LL signs reflect people's holistic appreciation of space and the diversity that it contains, and, in turn, they re-define and shape place as the locus of complex community relations. In this latter sense, Manchester's LLs help forge and communicate new and complex civic identities.

The city's superdiverse character is reflected primarily through private signage. Local government and other public agencies show limited engagement in the LL. Rather than impose a regulatory environment in which public institutions act as the guarantors of language rights and language heritage, Manchester's public agencies' language use on signs is often an emblematic gesture of recognition of linguistic diversity that helps brand the city as diverse by flagging its commitment to inclusion, which in turn is regarded as linked to the city's potential for economic growth and development. In isolated cases, public agencies avail themselves of multilingual signage as an interventionist strategy, aimed at directing the attention of a particular target group of residents to certain norms and procedures.

Our study piloted the use of a mobile digital tool to collect and analyse images of LLs on a large-scale basis and in a single location; this prompts a number of methodological reflections. *LinguaSnapp's* mapping tool has helped us identify both clusters and outliers, demonstrating the potential of geo-referencing methods. It also allowed us to combine quantitative and qualitative evaluations, capturing more effectively the way in which 'meaning making' reaches out across signs. At the same time it helped us consider the role of languages with a quantitatively modest presence within a wider perspective and to examine how they too can contribute to creating space, often capitalising precisely on their numerical 'rarity' and thus exclusivity. Indeed, through the comparative lens, the absence of certain languages from particular sectors, functions, or design patterns may be as meaningful as their presence therein.

Manchester's LLs allow us to draw a profile of the multilingual city. Language signage reflects how identity is negotiated at community level and at the same time

embraces a wider collective or a plurilingual civic identity. Language use in the LL shows how this emerging civic identity consists simultaneously of many discretely constituted communities, of a coming together of different communities, of the complex linguistic repertoires of individuals and groups, and of the complex relationship between space and network. The tool's combination of imagery, geo-location, link to on-site street-view, searchable index of descriptors, and its potential to display, in due course, time-layered patterns, make it a dynamic resource that is suitable for capturing the complexity of publicly written language and the web of interactions and transactions that it represents. The tool's public accessibility and use of the familiar Google Maps platform equip it for popular engagement, which mirrors the very bottom-up and organic nature of the city's LLs. The fact that the resource has already been embraced by local policy makers and integrated into the City Council's online Statistics and Intelligence Hub is an indicator that it fills a gap in the need for innovative tools that can be used to assess the complexity of urban superdiversity.

This also shows that the globalised urban setting requires a 'post-national', civic response strategy, for which novel instruments of data collection and data assessment are needed. With its potential to assess both synchronic and diachronic trends, LinguaSnapp can inform planning and help service providers better understand local needs and practices. Use of the tool is, of course, not limited to Manchester. The analytical descriptors offer excellent opportunities to compare worldwide, multi-site corpora in respect of, for example, sector-based, language-based, or design-based trends, and thus to assess local patterns from a genuinely global perspective.

Finally, the digital tool, by its very nature, through its dependency on clearly defined discrete units, provokes us into reconsidering the very notion of categories, boundaries, and partitions among languages. Multilingual individuals process speech in an integrated repertoire rather than as invariably separable 'language systems' (cf. Matras 2009). Writing, especially the public display of the written form of language is thought of as a tightly regulated practice, highly scripted in every literal sense of the term. Yet in the context of the globalised city, where boundaries become fuzzy, there is a need to re-think our approach even to the categorisation of the written word. Gorter & Cenoz's (2015) discussion of *translanguaging* in the LL, Otsuji & Pennycook's (2010) notion of *metrolingualism*, and Blommaert (2013) notion of *complexity* in the LL, all challenge the fixedness that is implied by the notions of 'language' and 'boundaries'. We have found evidence that sign writers make use of their full, complex repertoires to convey information to a multilingual audience. Communities, which are often defined through their ownership of a distinct language, are found in reality not to be plainly or consistently language-specific, but composed instead of individuals who are organised in networks, and who may transcend and thereby transform the boundaries of conventional categorisations. This prompts us to pursue new paths in order to understand the processes that shape and define identities and practices, in language and beyond.

Acknowledgements

We are grateful to Andrew Jerrison and the University of Manchester's IT Services as well as to Hazel Gardner and Alex Robertson for support for the development of the LinguaSnapp tool; to University of Manchester students who, during the spring semester of 2016, contributed to the collection of LL images across Manchester; and to student volunteers, who supported the translation of signs. Student authored reports based on the LinguaSnapp corpus of images can be accessed under 'Reports' via the Multilingual Manchester website (mlm.humanities.manchester.ac.uk). We are also grateful to our University of Manchester colleagues Cecilia Wong, James Nazroo, Aneez Esmail, Erica Burman, Rebecca Tipton, and Bethan Harries for discussions as part of the network group on 'Responses to Superdiversity', which helped inspire some of the ideas presented in this paper, and acknowledge support for that network from the University of Manchester's Humanities Strategic Investment Fund.

References

- Amos, W. 2016. Chinatown by Numbers: Defining an ethnic space by empirical linguistic landscape. *Linguistic Landscape: An International Journal*, 2(2), 127-156.
- Androutsopoulos, J. 2014. Computer-mediated Communication and Linguistic Landscapes. In J. Holmes & K. Hazen (eds.) *Research Methods in Sociolinguistics: A Practical Guide*. Wiley-Blackwell, 74-90.
- Archives plus. 2016. "Chinese Community. From laundries to Chinatown. Manchester Central Library. <<http://www.archivesplus.org/history/chinese-community/>> [accessed 7 November 2016].
- Arnaut, K., Blommaert, J., Rampton, B., & M. Spott. (eds.). 2015. *Language and Super diversity*. Routledge.
- Backhaus, P. 2005. Signs of multilingualism in Tokyo—a diachronic look at the linguistic landscape. *International Journal of the Sociology of Language*. (175-176), 103-121.
- Backhaus, P. 2007. *Linguistic Landscapes: A Comparative Study of Urban Multilingualism in Tokyo*. Clevedon: Multilingual Matters.
- Barni, M., & C. Bagna. 2009. A mapping technique and the linguistic landscape. In E. Shohamy & D. Gorter (eds.), *Linguistic Landscape: Expanding the Scenery*. London: Routledge, 126-140.
- Barni, M., & C. Bagna. 2010. Linguistic Landscape and Language Vitality. In E. Shohamy, E. Ben-Rafael, & M. Barni (eds.), *Linguistic Landscape in the City*. Bristol: Multilingual Matters, 3-18.

- Barni, M. & C. Bagna. 2015. The critical turn in LL: New methodologies and new items in LL. *Linguistic Landscape: An International Journal*. 1(1), 6-18.
<<https://benjamins.com/#catalog/journals/ll.1.1-2/toc>> [accessed 1 March 2016]
- Barni, M., & M. Vedovelli. 2012. Linguistic landscapes and language policies. In C. Hélot, M. Barni, R. Janssens, & C. Bagna (eds.), *Linguistic Landscapes, multilingualism and social change*. Frankfurt am Main: Peter Lang, 27-38.
- BBC. 2004. History of Manchester's Chinatown.
<<http://www.bbc.co.uk/manchester/chinatown/2004/01/history.shtml>> [accessed 16 May 2016].
- BBC. 2009. The Kebab Mile? *Manchester Places*.
<http://www.bbc.co.uk/manchester/content/articles/2009/05/12/120509_kebab_curry_mile_feature.shtml> [accessed 16 May 2016].
- BBC. 2011. UK Libyans 'dance in the streets' after Gaddafi's death.
<<http://www.bbc.co.uk/news/uk-15394166>> [accessed 1 November 2016]
- Ben-Rafael, E. 2009. A sociological approach to the study of linguistic landscapes. In E. Shohamy & D. Gorter (eds.), *Linguistic landscape: Expanding the scenery*. London: Routledge, 40-54.
- Ben-Rafael, E.; Shohamy, E.; Amara, H. & N. Trumper-Hecht. 2006. Linguistic Landscape as Symbolic Construction of the Public Space. The Case of Israel. *International Journal of Multilingualism* 31, 7-30.
- Ben-Rafael, E.; Shohamy, E. & M. Barni (eds.). 2010. *Linguistic landscape in the city*. Bristol: Multilingual Matters.
- Bever, O. 2010. Linguistic Landscapes of Post-Soviet Ukraine: Multilingualism and Language Policy in Outdoor Media and Advertising. Published PhD Dissertation. University of Arizona. <<http://bit.ly/2bzcGIp>> [accessed 28 July 2016]
- Blackwood, R. 2015. LL explorations and methodological challenges. *Linguistic Landscape: An International Journal*. 1(1/2), 38-53.
- Blackwood, R., Lanza, E. & H. Woldemariam (eds.). 2016. *Negotiating and contesting identities in linguistic landscapes*. Bloomsbury Publishing.
- Blackwood, R. & S. Tufi. 2010. Trademarks in the linguistic landscape: methodological and theoretical challenges in qualifying brand names in the public space. *International Journal of Multilingualism*. 7(3), 197- 210.
- Blommaert, J. 2010. *The Sociolinguistics of Globalization*. Cambridge: Cambridge University Press.
- Blommaert, J. 2012. Chronicles of complexity: Ethnography, superdiversity, and linguistic landscapes. *Tilburg Papers in Culture Studies*, 29, 1-149.
- Blommaert, J. 2013. *Ethnography, Superdiversity and Linguistic Landscapes Chronicles of Complexity*. Bristol: Multilingual Matters.
- Blommaert, J. 2015. Superdiversity old and new. *Language & Communication* 44, 82-88.

- Blommaert, J. 2016. Commentary: The conservative turn in Linguistic Landscape Studies. <<https://goo.gl/PMevuG>> [accessed 28 February 2016]
- Blommaert, J. & A. Backus. 2011. Repertoires revisited: ‘Knowing language’ in superdiversity. *Working papers in Urban language and Literacies*. <<http://www.kcl.ac.uk/sspp/departments/education/research/ldc/publications/workingpapers/67.pdf>> [accessed 16 July 2016].
- Blommaert, J. & I. Maly. 2014. Ethnographic linguistic landscape analysis and social change: A case study. *Tilburg Papers in Culture Studies*, 100, 11-33.
- Boudon, R. 1990. *La place du désordre. Critique des théories du changement social*. Paris: Quadrige.
- Bourdieu, P. 1983. *La distinction: Critique sociale du jugement*. Paris: Les Editions de Minuit.
- Bullen, E. 2015. *Manchester Migration: A profile of Manchester’s migration patterns*. Performance and Intelligence, Chief Executive’s Department, Manchester City Council. <goo.gl/DfoFD8> [accessed 1 September 2016].
- Butt, R. 2004. HSBC opens Chinese community branch. Manchester Evening News. <<http://www.manchestereveningnews.co.uk/business/business-news/hsbc-opens-chinese-community-branch-1138803>> [accessed 1 November 2016]
- Calvet, L. 1990. Des mots sur les murs: Une comparaison entre Paris et Dakar. In Robert Chaudenson (ed.). *Des langues et des villes (Actes du colloque international à Dakar, du 15 au 17 décembre 1990)*, 73–83.
- Chatziioannou, M. 2009. “Greek Merchants in Victorian England. In Tziovas, D. (ed.) *Greek Diaspora and Migration Since 1700: Society, Politics and Culture*. New York: Routledge, 45-60.
- Cenoz, J. & D. Gorter. 2006. Linguistic Landscape and Minority Languages. *International Journal of Multilingualism* 3(1), 67-80.
- Christiansen, F. 2003. *Chinatown, Europe. An exploration of overseas Chinese identity in the 1990s*. London and New York: RoutledgeCurzon.
- Collins, J. & S. Slembrouck. 2007. Reading Shop Windows in Globalized Neighborhoods. *Journal of Literacy Research* 39, 335-356.
- Cook, V. 2015. Meaning and Material in the Language of the Street. *Social Semiotics*. 25(1), 81-109.
- Cresswell, T. 2004. *Place: A Short Introduction*. Oxford: Blackwell Publishing. Curtin, M. 2009. Languages on display: Indexical signs, identities, and the linguistic landscape of Taipei. In E. Shohamy & D. Gorter (eds.), *Linguistic Landscape: Expanding the Scenery*. London: Routledge, 221-237.
- Dixson, A. 2015. Analyzing the multilingual linguistic landscape of Buffalo, New York. MA Thesis submitted to the State University of New York. <goo.gl/GqhTQP> [accessed 16 May 2016]
- Donakey, A. 2007. *Language Planning and Policy in Manchester*. Published MA Dissertation. University of Manchester. <goo.gl/9Izl3O> [accessed 28 February 2016]

- Elazar, D. 1999. "British Jewry". Jerusalem Centre for Public Affairs.
<<http://www.jcpa.org/dje/articles3/british.htm>> [accessed 7 November 2016].
- Fairclough, N. 2001. *Language and power* (2nd ed.) London: Longman.
- Gaiser, L. 2014. Reading the Curry Mile: Language Use in the Linguistic Landscape of Rusholme, Manchester. Published Bachelors Thesis.
<goo.gl/Z1hGYG> [accessed 28 February 2016]
- Gaiser, L. & Y. Matras. 2016. Language provisions in access to primary and hospital care in central Manchester. MLM report submitted to Manchester CCGs, June 2016.
- García, O. & L. Wei. 2014. *Translanguaging: Language, bilingualism and education*. London: Palgrave Macmillan.
- Goffman, E. 1981. *Forms of Talk*. Philadelphia: University of Pennsylvania Press.
- Gorter, D. 2006. (ed.). *Linguistic landscape: A new approach to multilingualism*. Clevedon: Multilingual Matters.
- Gorter, D. 2013. Linguistic landscapes in a multilingual world. *Annual Review of Applied Linguistics*. 33, 190-212.
- Gorter, D. & J. Cenoz. 2015. Translanguaging and linguistic landscapes. *Linguistic Landscape: An International Journal*, 1(1-2), 54-74.
- Haarmann, H. 1989. *Symbolic Values of Foreign Language Use. From the Japanese Case to a General Sociolinguistic Perspective*. New York: Mouton De Gruyter.
- Halliday, F. 1992. The millet of Manchester: Arab merchants and cotton trade. *British Journal of Middle Eastern Studies*, 19(2), 159-176.
- Hannaford, L. 2016. KML maps. <<http://www.lizhannaford.com>> [accessed 8 August 2016]
- Harries, B. 2016 What's sex got to do with it? When a woman asks questions." *Women's Studies International Forum* (59), 48-57.
- Heller, M. (ed.) 2007. *Bilingualism: A Social Approach*. London: Palgrave.
- Holy Trinity Armenian Church [HTAC]. 2016. *Our Histroy*.
<<http://www.armenianchurchmanchester.org/our-history/>> [accessed 1 November 2016].
- Huang, Y. 2010. London Chinatown: Sociolinguistic Ethnography of Visuality. PhD Dissertation University of Jyväskylä.
- Huebner, T. 2009. A framework for the linguistic analysis of linguistic landscapes. In E. Shohamy & D. Gorter (eds.), *Linguistic landscape: Expanding the scenery*. London: Routledge, 70-87.
- Huebner, T. 2006. Bangkok's Linguistic Landscapes. Environmental Print, Codemixing and Language Change. *International Journal of Multilingualism* 3(1), 30-57.
- Hult, F. 2014. Drive-thru linguistic landscaping: Constructing a linguistically dominant place in a bilingual space. *International Journal of Bilingualism*, 18(5), 507-523.

- Jaworski, A. 2014. *Welcome: Synthetic personalization and commodification of sociability in the linguistic landscape of global tourism*. In B. Spolsky, O. Inbar, & M. Tannenbaum (eds.), *Challenges for language education and policy: Making space for people*. London: Routledge, 214-231.
- Jaworski, A. & C. Thurlow. 2010. *Semiotic Landscapes. Language, Image, Space*. London: Continuum.
- JCR. 2016. Congregation History. Manchester Great New and Central Synagogue. Jewish Communities & Records. <http://www.jewishgen.org/jcr-uk/Community/m29_great-new/congregation_history.htm> [accessed 7 November 2016].
- Kelly-Holmes, H. 2005. *Advertising as Multilingual Communication*. Basingstoke: Palgrave MacMillan.
- Kick, I. 2014. *Die Wirkung von Anglizismen in der Werbung: „Just do it“ oder lieber doch nicht?*. Hamburg: Diplomica Verlag.
- Kress, G. & T. Van Leeuwen. 2006. *Reading Images. The Grammar of Visual Design*. London: Routledge.
- Landry, R. & R. Bourhis. 1997. Linguistic Landscape and Ethnolinguistic Vitality. An Empirical study. *Journal of Language and Social Psychology* 16(1), 23-49.
- Leeman, J. & G. Modan. 2009. Commodified Language in Chinatown. A Contextualized Approach to Linguistic Landscape. *Journal of Sociolinguistics* 13(3), 332-362.
- Lefebvre, H. 1991. *The production of space*. vol. 142. Blackwell: Oxford.
- LinguaSnapp. 2015. URL <<http://www.linguasnapp.manchester.ac.uk/>>.[accessed 2 September 2016]
- LinguaSnapp. 2016a. LinguaSnapp administration site. <<http://www.linguasnapp.manchester.ac.uk/Admin/>> [accessed 28 July 2016]
- LinguaSnapp. 2016b. LinguaSnapp public map. <<http://www.linguasnapp.manchester.ac.uk>> [accessed 28 November 2016]
- Li, W. 1994. *Three generations, two languages, one family - language choice and language shift in a Chinese community in Britain*. Clevedon, Avon: Multilingual Matters Ltd.
- Lou, J. 2007. Revitalizing Chinatown into a heterotopia: A geosemiotic analysis of shop signs in Washington, DC's Chinatown. *Space and Culture* 10, 170-194.
- Lou, J. 2010. Chinese on the side: The marginalisation of Chinese in the linguistic and social landscapes of Chinatown in Washington, DC. In E. Shohamy, E. Ben-Rafael, & M. Barni (eds.), *Linguistic Landscape in the City*. Bristol: Multilingual Matters, 96-114.
- Lou, J. 2016. *The Linguistic Landscape of Chinatown: A Sociolinguistic Ethnography*. Bristol: Multilingual Matters.
- Malinowski, D. 2006. Making Culture in Place: The creation of an online Korean-English forum to discuss the offline linguistic landscape. *Language Teaching at Berkeley* 21(2), 7-9.

- Malinowski, D. 2009. Authorship in the Linguistic Landscape. A Multimodal Performative View. In Shohamy, E. & D. Gorter (eds.), *Linguistic Landscape: Expanding the Scenery*. London: Routledge, 107-125.
- Matras, Y. 2009. *Language contact*. Cambridge UP.
- Matras, Y. & A. Robertson. 2015. Multilingualism in a post- industrial city: policy and practice in Manchester. *Current Issues in Language Planning* 16(3), 296-314.
- MCC. 2016. *Multi-Cultural Manchester*.
<http://www.manchester.gov.uk/info/448/archives_and_local_history/506/multi-cultural_manchester/9>
- MLM. 2013. Matras, Y., Gopal, D., Percival, L., Robertson, A., & M. Wright. 2013. Multilingual Manchester: A Digest.
<<http://mlm.humanities.manchester.ac.uk/pdf/MLMDigest.pdf>>
[accessed 28 July 2016]
- Nazroo, J. 2001. *Ethnicity, class and health*. London: Policy Studies Institute.
- Nazroo, J. & S. Karlsen. 2003. Patterns of identity among ethnic minority people: diversity and commonality, *Ethnic and Racial Studies*, 26(5), 902–30.
- Nazroo, J., Stafford, M., Popay, J., & M. Whitehead. 2008. Tackling inequalities in health: evaluating the New Deal for Communities initiative. *Journal of Epidemiology and Community Health* 62(4), 298-304.
- Otsuji, E & A. Pennycook. 2010. Metrolingualism: Fixity, fluidity and language in flux. *International Journal of Multilingualism*, 7(3), 240-254.
- Panico, L, & J. Nazroo. 2011. The social and economic circumstances of mixed ethnicity children in the UK: Findings from the Millennium Cohort Study." *Ethnic and Racial Studies* 34(9), 1421-1444.
- Papen, U. 2012. Commercial discourses, gentrification and citizens' protest: The linguistic landscape of Prenzlauer Berg, Berlin1. *Journal of Sociolinguistics*, 16(1), 56-80.
- Pavlenko, A. 2009. Language conflict in post-Soviet linguistic landscapes. *Journal of Slavic Linguistics*, 17(1-2), 247-274.
- Pavlenko, A. 2010. Linguistic landscape of Kyiv, Ukraine: A diachronic study. In E. Shohamy, E. Ben-Rafael, & M. Barni (eds.), *Linguistic Landscape in the City*. Bristol: Multilingual Matters, 133-150.
- Pennycook, A. 2009. Linguistic landscapes and the transgressive semiotics of graffiti. In E. Shohamy & D. Gorter (eds.), *Linguistic landscape: Expanding the scenery*. New York, NY: Routledge, 302-312.
- Pietikäinen, S., Lane, P., Salo, H., & S. Laihiala-Kankainen. 2011. Frozen actions in the Arctic linguistic landscape: A nexus analysis of language processes in visual space. *International Journal of Multilingualism*, 8(4), 277-298.
- Polish Church. 2016. "Misericordia".
<http://www.parafiamanchester.co.uk/index.php?option=com_content&view=article&id=55&Itemid=58> [accessed 7 November 2016].

- Radtke, O. & X. Yuan. 2011. 'Please don't climb trees and pick flowers for the sake of life': Making sense of bilingual tourism signs in China. *Language and Intercultural Communication*. 11, 389-407.
- Reh, M. 2004. Multilingual Writing. A Reader-Orientated Typology. *International Journal of the Sociology of Language* 170, 1-41.
- Rosenbaum, Y.; Nadel, E.; Cooper, R. & J. Fishman. 1977. English on Keren Kayemet Street. In Fishman, J., Cooper, R. & A. Conrad (eds.), *The Spread of English*. Rowley: Newbury House, 179-196.
- Rubdy, R. 2015. Conflict and Exclusion: The Linguistic Landscape as an Arena of Contestation. In Rubdy, R. & B. Said (eds.), *Conflict, Exclusion and Dissent in the Linguistic Landscape*. London: Palgrave Macmillan, 1-24.
- Ryan, D. 2011. *A comparison of the Linguistic Landscapes of Manchester*. Published Masters Thesis. <<http://mlm.humanities.manchester.ac.uk/wp-content/uploads/2015/12/Linguistic-landscapes.pdf>>, [accessed 1 March 2016]
- Said, B. 2011. Data Triangulation as a Resource in Multilingual Research: Examples from the Linguistic Landscape. In *Proceedings of the Conference on Doing Research in Applied Linguistics*. King Mongkut's University of Technology Thonburi and Macquarie University.
- Scollon, R. & S. Scollon. 2004. Nexus analysis: discourse and the emerging internet. London: Routledge.
- Scollon, R. & S. Scollon. 2003. *Discourses in Place. Language in the Material World*. London: Routledge.
- Sergeant, P. 2012. Between Script and Language: The Ambiguous Ascription of 'English' in the Linguistic Landscape. In Hélot, C.; Barni, M.; Janssens, R. & C. Bagna (eds.), *Linguistic Landscapes, Multilingualism and Social Change*. Frankfurt Am Main: Peter Lang, 187-200.
- Sebba, M. 2012. Multilingualism in Written Discourse. An Approach to the Analysis of Multilingual Texts. *International Journal of Bilingualism* 17, 97-118.
- Seddon, M. 2012. Arab communities in Manchester, 1839-2012: A brief history. A paper presented as part of the Café Historique's Manchester Men series 28/01/12 at The Manchester Museum. Accessible online at <https://issuu.com/newobjectlessons/docs/arab_communities_in_manchester_1839_2012>
- Shohamy, E. & D. Waksman. 2009. Linguistic landscape as an ecological arena: Modalities, meanings, negotiations, education. In E. Shohamy & D. Gorter (eds.), *Linguistic landscape: Expanding the scenery*, 313-330. New York: Routledge.
- Soukup, B. 2016. English in the linguistic landscape of Vienna, Austria (ELLViA): Outline, rationale, and methodology of a large-scale empirical project on language choice on public signs from the perspective of sign-readers. *Vienna English Working Papers*. <https://anglistik.univie.ac.at/fileadmin/user_upload/dep_anglist/Views_25_2016_Soukup_final_3.pdf> [accessed 22 August 2016].

- Spolsky, B. & R. Cooper. 1991. *The Languages of Jerusalem*. New York: Oxford University Press.
- Stroud, C. & S. Mpendukana. 2009. Towards a material ethnography of linguistic landscape: Multilingualism, mobility and space in a South African township. *Journal of Sociolinguistics*, 13(3), 363-386.
- Syrett, S. & Sepulveda, L. 2011. Realising the diversity dividend: population diversity and urban economic development. *Environment and Planning A* 43:2, 487-504.
- Tuan, Y. 1977. *Space and Place: The Perspective of Experience*. Minneapolis: University of Minnesota Press.
- UK Copyright, Designs and Patents Act 1988. The National Archives. <<http://www.legislation.gov.uk/ukpga/1988/48/section/62>> [accessed 16 May 2016].
- Vandenbroucke, M. 2015. Language visibility, functionality and meaning across various TimeSpace scales in Brussels' multilingual landscapes. *Journal of Multilingual and Multicultural Development*. 36(2), 163-181.
- Van der Aa, F. & J. Blommaert. 2015. Ethnographic monitoring and the study of complexity. *Tilburg Papers in Culture Studies* 123.
- Vaughan, L. & A. Penn. 2005 Jewish Immigrant Settlement Patterns in Manchester and Leeds 1881. *Urban Studies*. <http://discovery.ucl.ac.uk/883/1/Vaughan_Penn2005.pdf>. accessed 23 November 2016.
- Vertovec, S. 2012. "Diversity" and the social imaginary. *European Journal of Sociology*, 53(03), 287-312.
- Wan, D. 2012. Manchester Chinatown campaign for regeneration project: The Dragon Boat Race. *Nee Hao*. <<http://www.neehao.co.uk/2012/06/manchester-chinatown-dragon-boat-race/>> [accessed 18 June 2016].
- Weber, J. & Horner, K. 2012. *Introducing Multilingualism: A Social Approach*. London: Routledge.
- Wei, L. 1994. *Three Generations, Two Languages, One Family: Language Choice and Language Shift in a Chinese community in Britain*. Clevedon: Multilingual Matters.
- Wenzel, V. 1996. Reklame en tweetaligheid in Brussel: Een empirisch Onderzoek naar de spreiding van Nederlandstalige en Franstalige affiches. In Vrije Universiteit Brussel (ed.). *Brusselse thema's* 3, Brussels: Vrije Universiteit, 45-74.
- Werbner, P. 1990. *The Migration Process*. Oxford: Berg.
- Wong, C. 2015. A framework for 'City Prosperity Index': linking indicators, analysis and policy. *Habitat International*, 45, 3-9.
- Wong, C., Webb, B., Hincks, S. & Schultze-Baing, A. 2015a. Mapping policies and programmes: the use of GIS to communicate spatial relationships in England. *Environment and Planning* 42:6, 1020-1039.
- Wong, C., Webb, B., Schultze-Baing, A., Baker, M. & Hincks, S. 2015b. Spatial synergies and conflicts: Monitoring government policies and programmes in England. In: Woltjer, J., Alexander, E., Hull, A. & Ruth, M. eds. *Place-based evaluation for integrated land-use management*. London: Routledge. 179-199.

- Woolard, K. 1999. Simultaneity and bivalency as strategies of bilingualism. *Journal of Linguistic Anthropology*. 8(1), 3-29.
- Young, C., Diep, M. & Drabble, S. 2006. Living with difference? The 'cosmopolitan city' and urban reimagining in Manchester, UK. *Urban Studies* 43(10), 1687–1714.
- Youth Development Trust. 1967. *Young and coloured in Manchester*. A report written by members of the Youth Development Trust.
- Zabrodskaia, A. & T. Milani. 2014. Signs in context: Multilingual and multimodal texts in semiotic space. *International Journal of the Sociology of Language*. 228, 1-6.
- Zeevi, I., & D. Dubiner. 2016. Outdoor signage as a trait in the linguistic landscape during Operation Protective Edge. *Linguistic Landscape: An International Journal*. 2(1), 80-103.
- Ziegler, E. 2013. Metropolenzeichen: Visuelle Mehrsprachigkeit in der Metropole Ruhr. *Zeitschrift für germanistische Linguistik. (Forschungsnotiz)*, 299-301.