Why diachronicity matters in the study of linguistic landscapes

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It is commonly argued that the proliferation of urban writing known as linguistic landscapes represents “a thoroughly contemporary global trend” (Coupland, 2010: 78). The purpose of this paper is to show that linguistic landscapes are by no means modern phenomena and to draw on our shared interest in multilingual empires to highlight the importance of diachronic inquiry and productive dialog between sociolinguists of modern and ancient societies. We will argue that while signs do operate in aggregate, the common focus on all signs *at a single point in time on one street* is problematic because the interpretation of signs is diachronic in nature, intrinsically linked to the preceding signs in the same environment and to related signs elsewhere, and the process of reading “back from signs to practices to people” (Blommaert, 2013: 51) is not as unproblematic as it is sometimes made to look.

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Studies of linguistic landscapes typically focus on an aggregate of signs *at a single point in time* and often make three assumptions: (a) that the proliferation of urban writing known as linguistic landscapes represents “a thoroughly contemporary global trend” (Coupland, 2010: 78) — hence, the interest in the here and now, (b) that signs operate in aggregate and the understanding of any sign requires consideration of other signs in the same environment (Scollon & Scollon, 2003) — hence, the attempt to document ‘all signs on one street’, and (c) that “by looking at public signs … we can perform *a reconstruction of the communication patterns for which such signs were manufactured*” (Blommaert, 2013: 50). While not denying the importance of the aggregation of signs in linguistic landscapes, the purpose of this paper is to challenge these assumptions and to show (a) that linguistic landscapes are by no means modern phenomena, (b) that the interpretation of signs is intrinsically linked to the preceding signs in the same environment and to related

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signs elsewhere and is thus diachronic in nature, and (c) that reading "back from signs to practices to people" (Blommaert, 2013: 51) is not as unproblematic as it is sometimes made to look, and ignores the diachronic dimension at its peril.

Drawing on our shared interest in multilingual empires, where linguistic landscapes often function as a key terrain of language contact, creativity, and contestation, we will speak from our respective positions: Aneta as an applied linguist and an expert on multilingualism in Russia, the USSR, and post-Soviet successor states and Alex as a classicist and an expert on multilingualism in the Roman Empire. Our intentions are to highlight the importance of diachronic investigations of linguistic landscapes and to forge a way for productive dialog between sociolinguists of modern and ancient societies, at the same time keeping in mind the hurdles of disciplinary boundaries and diversity in practices and conventions across time and space.

1. Epigraphic landscapes of antiquity

In modern sociolinguistics, the study of linguistic landscapes is relatively novel; in contrast, classicists have been studying epigraphy, which includes writing in public spaces, for centuries (see Bérard et al., 2010; Bodel, 2001; Cooley, 2012 for surveys), with more recent investigations focused on multilingualism (Adams, 2003; Adams, Janse, & Swain, 2002; Cotton et al., 2009; Mullen, 2013; Mullen & James, 2012) and the epigraphic landscape (Baird & Taylor, 2011; Keegan, 2014; Sears et al., 2013). Analyses of epigraphic landscapes commonly treat stationary signs, ranging from monumental inscriptions to graffiti, located (or assumed to have been located) in urban public spaces, such as *fora* and crossroads, within enclosed public spaces, such as baths and temples, and in extensions of urban spaces, such as sepulchral roads outside the city limits and rural sanctuary complexes.

Given the basic similarity in focus, at first glance, interaction between researchers of antiquity and the modern world appears to offer nothing but benefits: the study of epigraphic landscapes could benefit from the theoretical apparatus developed for the study of modern linguistic landscapes, while modern sociolinguistics could benefit from the methodological expertise accumulated in the study of epigraphy, which ranges from analyses of life-cycles of inscriptions to applications of spatial mapping. Yet the dialog between scholars of ancient and modern worlds is fraught with complications. Our difficulties begin with the perennial difficulty of speaking the 'same language' across disciplines and continue with the lack of fixity in the meanings of 'language', 'sign / signage' (terms which classicists may find jarring) and 'public space' and an uncomfortable realization that the imposition of these categories may distort the image of the past reconstituting it in terms of our own concerns and preoccupations.

Differences in the material available for analysis exacerbate the problems. For modern linguistic landscapes we can access signs in their original context and interpret them based on the cues from ethnographic observations, interviews and speech recordings. The study of antiquity, on the other hand, is constrained by our partial ability to understand the written material, the fragmentary nature of much of the evidence and the dissociation from its contexts, authors and addressees (Mullen, 2013). Perhaps most seriously, we only have access to what has survived of the epigraphic landscapes, and this is skewed by patchy preservation patterns, recovery and recording practices. For example, in the case of Roman Britain, although the environmental conditions and high density of urban development are generally not conducive to good preservation of ancient inscribed materials, the archaeological investigations, early-modern to modern preservation and documentation are excellent. Conversely, some other ex-Roman provinces have ideal environmental conditions for the preservation of a range of writing supports but these have been less comprehensively preserved and published in later centuries.

In view of such differences, one might be tempted to wonder whether the study of linguistic landscapes *should* continue to focus on the here and now and the authors and viewers who can be located and interviewed. Such an approach would imply, however, that only the present matters and, in doing so, shy away from the intellectual and evidential challenges of understanding the role of the past in the construction of the present. We contend that the benefits of an interdisciplinary dialog outweigh the inevitable dangers of distortion, oversimplification and miscommunication. In particular this conversation might reveal what is genuinely new about modern linguistic landscapes and multilingual practices and what reflects a centuries or even millennia-old tradition. Even more important is the reminder that all approaches to linguistic landscapes, ancient *and* modern, are highly subjective. The moment we start looking back, we realize that in the study of contemporary situations we bring a great deal of implicit knowledge to the task all the while believing we are 'reading back' in some systematic and objective way from the signs. In the study of the past, be it recent or remote, such knowledge cannot be taken for granted and, as with all historical disciplines, it is crucial to establish what plausible assumptions can be made when we actually do attempt to 'read back' from signs to (discontinued) practices and (absent) people and what constraints should be placed on these assumptions.

2. The importance of diachronicity

To establish a common ground we anchor our discussion in Scollon and Scollon's (2003) view of 'public signs' as semiotic aggregates, the nexus of the interaction of multiple semiotic systems, including the habitus of social actors, visual semiotics, the semiotics of place, and interaction order. We are convinced by Scollon and Scollon's (2003) principle of *indexicality*, which posits that all semiotic signs derive part of their meaning from the place and time in which they are located (*emplacement*). We also follow their principle of *dialogicality*, which states that understanding of any sign requires consideration of other signs in the same environment, but regret that this has fuelled the 'all signs on one street *on one day*' approach. What is missing is appropriate consideration of *diachronicity*. A diachronic approach to linguistic landscapes should encompass two elements: (a) the approach of 'all signs in one place *over time*' and (b) the awareness that sign interpretation takes place not just in the context of the other signs in the same environment but in the context of the signs of the same type previously seen by the viewers.

Studies of cognitive processing compellingly show that while our understanding of signs does rely on our experience with other signs, this dialogicality is primarily diachronic and not synchronic in nature. This interpretive process is grounded in human processing abilities that have remained invariant throughout the past 5,000 years and likely much longer (e.g., Dehaene, 2009; Donald, 2001). The first of these is *automatic pattern recognition* that allows us, for instance, to focus on invariant aspects of character shapes and letter sequences and filter out irrelevant variation (Dehaene, 2009). Repeated exposure to the same patterns also creates a sense of familiarity and normativity. The scope of what is normative varies across individuals, cultures, time, and space but what remains constant is our reliance on patterns and our automatic predilection to detect and evaluate deviations from these patterns. To understand the perception of particular signs in terms of familiarity and normativity, the analyst needs to establish how the sign in question resembles or differs from the other signs in *the same category* and thus can rely on corpora that allow for comparisons of signs across time and space.

This takes us to the second cognitive ability shared by humans, *automatic categorical perception*, i.e. perception of the continuous stream of visual, phonological or material stimuli in terms of more or less discrete categories, shaped by our languages and experiences (e.g., tombstone/boundary stone). While the categories vary across individuals, time, and space, what remains invariant is the cognitive mechanism by which we perceive things in categories. In the study of linguistic landscapes, then, our task is to uncover local categories, without imposing our own, which, due to their familiarity, we perceive as normative.

By itself, however, categorical perception is relatively useless to us — its uses are intrinsically linked to the inherent drive to impose meaning on things, which is reflected in our assumptions of and search for indexicality of the signage. It is also linked to our *interpretive ability* to impose meanings on individual categories in ways more or less consistent with those of other members of our community, supported by *associative memory*, which enables the linking of symbols with meanings, people or phenomena. What is particularly important is that while it is largely automatic, our interpretive activity is by no means neutral — as humans, we are constantly engaged in automatic appraisal (evaluation) of the stimuli in terms of their novelty (deviation from the norm), salience, affective valence (positive/negative), and relevance to our own goals, values, and needs (Brosch et al., 2010). In the study of linguistic landscapes, then, we can ask which individuals the signs are or were relevant for, what made them salient, and what meanings and values may be attributed to particular interpretive categories and indexical links.

Undoubtedly, there are many other aspects of cognitive processing involved in our perception, evaluation, and interpretation of signs, but what we hoped to make clear in this brief overview is that humans tend to perceive and evaluate the present in terms of past experiences and any attempts to read back from signs to people require a diachronic and corpus-based approach. Analyses of corpora allow us to understand what may constitute recognizable patterns in particular types of signage, what was normative in a particular time and place, and what may be perceived as a deviation.

3. Reading back from signs to practices to people

In what follows we will consider ways in which analysts have linked signs to practices and people through approaches that treat public signs, respectively, as practice, as image, and as language (Sebba, 2014), while keeping in mind the idea that signs are semiotic aggregates that require the application of multiple analytical lenses.

3.1 Signs as discursive practice: Interpreting distributional patterns

The first analytic approach that links signs, practices and people aims to identify distributional regularities and to interpret these regularities and the deviations from them. In diachronic inquiry, such analysis is constrained by uneven patterns of preservation of written evidence across sites and materials, yet even limited comparisons constitute a productive means of understanding social stratification and orders of indexicality in the local communities, connectivity between centers and peripheries, and development of epigraphic trends.

In the study of the Roman world, correlational analyses of the placement, frequency, content, and language choice of the signage, combined with available archaeological, historical and literary evidence, allow researchers to attempt to reconstruct indexicality, the contours of the 'epigraphic habit', sociolinguistic attitudes and patterns of language maintenance and shift (Mullen, 2013; Mullen & James, 2012). In eastern imperial contexts with more than one epigraphic tradition, such as Asia Minor, the Near East and Egypt, Latin functioned as a symbol of imperial power, the army and the regulation of public space (e.g., imperial and high-level military inscriptions, milestones), while Greek appeared as the lingua franca and the language of certain domains of high culture, medicine and specific religious and magical contexts, alongside other vernacular languages such as Aramaic and Egyptian. In North Africa too, even when Latin became established as the standard language for many functions of writing in public space, the cults of Serapis and Asclepius attracted Greek inscriptions (*IRT2009* nos 264–65, 310–13), while indigenous deities were referred to in Punic. These practices are also mirrored in areas of the Roman West where there was no long-standing local epigraphic tradition. For example, in Britain, where writing arrives comparatively late and almost exclusively in Latin, much of the locally inscribed material is produced by the military and the small amount of Greek tends to be found in the same restricted domains of Greek religion, magic and medicine (Mullen, forthcoming).

On a smaller scale, applications of spatial mapping to ancient epigraphic landscapes have allowed scholars to assess height and location, in conjunction with content, to identify graffiti authored by children (Huntley, 2011; Sears et al., 2013) and to consider the function of inscribed buildings (Bucking, 2012). Spatial mapping has also revealed cross-urban and cross-locational differences. Ephesos, for instance, displayed more bilingual Greek and Latin inscriptions than other cities in Asia Minor, and, in the city itself, the greatest concentration of such inscriptions was at the crossing of three roads, where inscribed monuments would have been seen by most passers-by (Burrell, 2009; Eck, 2009). Holder (2007) has recently used GIS to plot the distribution of inscribed material from Roman London and to make tentative claims about the possible zoning of activities in the bustling metropolis, which despite concerted archaeological analysis is still relatively poorly understood. Holder's article is a striking example of a genuine attempt at what Blommaert has termed reading "back from signs to practices", but in the absence of attention to diachronicity, the results flatten the complexity of centuries.

Studies of modern linguistic landscapes have also identified distributional differences in language use based on: (a) sign genre and authorship, with civic and municipal signs privileging official languages and commercial and tourist-oriented signs displaying a greater variety of codes; (b) city locations, with multilingual signs commonly clustered in the areas of city entry and exit (e.g., airports) and increased tourist activity, and (c) cities in the same country, with some displaying higher incidence of multilingual signage than others (Backhaus, 2007; Ben-Rafael et al., 2006; Brown, 2007; Huebner, 2006; Kallen, 2009; Reh, 2004).

While the studies of modern distributional patterns have been largely synchronic, the patterns they identify offer a useful point of departure for diachronic analyses of linguistic landscapes. Examples of such diachronic historiographies can be found in the study of linguistic landscapes (e.g., Leeman & Modan, 2009; Pavlenko, 2010) and beyond, in the fields of history, literacy, and urban geography. Within classics, Wilson (2012), for example, assesses the Punic-Latin building inscriptions of Roman North Africa taking into account their distribution, visual aspects, materiality, informational arrangement and bilingual phenomena, and then linking these to function and community and tracing the evolutions over time. Studies from more recent well-documented time periods which might inform our work include Spalding's (2013) study of the evolution of street signage in Cork, Ireland and Henkin's (1998) study of the co-evolution of the cityscape and the practice of public reading in antebellum New York which documents the explosion of commercial signage and the imposition of English on the multilingual city.

3.2 Signs as image: Interpreting visual hierarchy and materiality

The second analytic approach considers the 'visual geometry' (Sebba, 2014) of signs (e.g., color, framing, letter-forms, spacing) and their materiality, where the key aspects include the permanence or durability of the material (e.g., marble conveying more permanence than paper), the type of work (e.g., scratching, carving, casting, engraving, enameling), and the quality and cost of the work (e.g., golden lettering conveying higher investment and authority than lettering in pencil). In the study of multilingualism, differences in materiality of the signs in respective languages may serve as an indication of unequal status of the languages. In Kyiv, Ukraine, for instance, permanent signage commonly appears in Ukrainian, the country's only official language, while temporary signs, such as advertising billboards, restaurant menus or announcements on shop doors, printed on paper and covered with sheets of plastic, appear in the more commonly spoken but unofficial Russian (Pavlenko, 2010, 2012) (Figure 1).

In the study of the Roman world, analyses that link languages and materiality have to take into account the fact that preservation, recovery and documentation vary widely across different areas. Just because certain materials, such as stone or metal, are more durable in a physical sense than papyrus or wood, this does not secure their survival: metal is valuable enough to be melted down almost everywhere

Figure 1. Temporary menu, Trattoria Pesto Azzurro, Kyiv, August 2014. Picture by A. Pavlenko.

and in areas where the local stone is unsuitable for carving, stone inscriptions are regularly reused; as a result, Roman lapidary epitaphs have languished upside-down high on medieval city walls and were even reused as toilet seats (Cooley, 2012). Despite the loss of much of the written material, with care (and with the help of literary sources, ancient artistic representations of cityscapes, and sites where preservation is exceptional, such as those in the shadow of Mount Vesuvius) some norms can be established in the interaction between genre and material in the Roman world: funerary inscriptions were commonly carved on stone, certain types of legal documents, such as treaties, statutes and decrees, were often engraved on bronze, and temporary public notices, such as electoral announcements and market prices, appeared on whitewashed wooden boards or plastered walls (Cooley, 2012; Eck, 2009; Sears et al., 2013).

Multilingual signs are also commonly analyzed in terms of the presentation and placement of texts in respective languages. Scollon and Scollon (2003) argue that preferred languages usually appear 'earlier' in the sign, that is on top, on the left or in the center, while marginalized ones appear on the bottom, on the right, or in the margin. Sloboda (2009) documents such differentiation in Slovakia, where, following state regulations, bilingual signs place texts in minority languages in smaller plaques positioned below those in Slovak. Similar arrangements have been documented in many Latin-Greek and Latin-local vernacular inscriptions across the Empire, where Latin appears first, on top of the other language, and often in larger letters (Burrell, 2009; Cooley, 2012; Eck, 2009; Mullen, 2013; Wilson, 2012) (Figure 2).

At the same time, assumptions about the preferred language require a qualification: what is processed earlier depends on the directionality of the script, the size of the font and the positioning of the text (the lower line in larger font at eye-level may well be processed before the top line in smaller letters), importance may also be underscored by the uses of imagery and color (Huebner, 2006). Furthermore, even when the language does appear in the apparently 'preferred' position, its prominence may be only 'aspirational'. In Belarus, for instance, bilingual signs often place Belarusian first, before Russian, yet this placement indexes symbolic prestige, while Russian remains the everyday language of the local population (Brown, 2007; Giger & Sloboda, 2008). Similar 'aspirational' placements of Welsh and Irish over English have been documented by Coupland (2010) in Wales and Spalding (2013) in Ireland.

Spalding's (2013) study of the evolution of street signs in Cork, between 1750 and 2000, offers the most comprehensive diachronic analysis of visual geometry and materiality to date, tracing the development of aesthetic and material aspects

Figure 2. Latin-Punic bilingual inscription related to the building of the theatre, Lepcis Magna (AD 1/2). Picture by A. Wilson, reproduced with kind permission.

Figure 3. Rosie O'Grady's Irish Pub, Kyiv, June 2012. Picture by A. Pavlenko.

of city nameplates from the timber and stone signs of the 18th century to cast iron signs with 'Egyptian' letters of the Victorian era and cast aluminium signs of the second half of the 20th century. Throughout, the visual and material changes are linked to re-appropriation, re-branding, and modernization of the public space and placed in the context of struggles for national self-determination, political and legislative changes, social and artistic movements, such as the Celtic revival, demographic shifts, gentrification, technological advances, spelling reforms, and the differing views of the relationship between English and Irish. Most importantly, the study highlights connections between visual and symbolic aspects of the signage, where Gaelic lettering, for instance, serves to add 'authenticity' and to denote 'Irishness' (see also Figure 3 for a similar approach taken in Kiev). Similarly, for the vast majority of the ancient population of the Roman East who could not speak Latin, even less read and write it, the impressive Roman lettering used on official and honorific inscriptions would no doubt have served a similarly symbolic role in channelling *Romanitas* and becoming synonymous with power, a role it still performs today.

3.3 Signs as language: Interpreting information arrangements and bilingual phenomena

The third analytic approach aims to link distributional patterns to information arrangements and bilingual phenomena to reconstruct the linguistic competencies of the assumed actors and the status of respective languages, with language dominance interpreted as a sign of higher status and/or 'ethnolinguistic vitality' (Landry & Bourhis, 1997; Reh, 2004). Lack of space prevents full discussion of the work on interpreting information arrangements and bilingual phenomena, instead we briefly discuss Reh's (2004) assumptions about information arrangements and linguistic competencies, challenge some of these assumptions and highlight the need for full criticism of the models and attempts at new solutions.

Reh (2004) discusses various types of written multilingualism in Lira municipality in Uganda and divides what might be called 'bi-version bilingual texts' (Mullen, 2013) into potentially helpful sub-categories: *duplicating* — where the two versions represent a more or less exact version of each other in two or more languages = 'homophonic' in Backhaus (2007); *fragmentary* — where the full text appears in one language (A) and a partial version in another (B) = Backhaus's (2007) 'mixed'; *overlapping* — where versions A and B provide some of the same information and some different content = Backhaus's (2007) 'mixed'; *complementary* — where the two versions provide different but complementary information = Backhaus's (2007) 'polyphonic'. Reh's Figure 10 lists the assumed language knowledge of the target community and individuals for these texts as 'multilingual', with the exception of *duplicating* bi-versions which are said to be associated with multilingual communities but monolingual individuals and *fragmentary* bi-versions which are associated with multilingual communities but monolingual or multilingual individuals.

Reh, certainly in this figure, though to a lesser extent in the main text, seems to assume that information arrangement reflects language competencies in a logical and straightforward way: a duplicating text, for example, provides two languages but assumes monolingual individuals, otherwise one of the texts is superfluous. Likewise bi-versions (whether overlapping or complementary) with texts which supply different information presuppose multilingual communities and individuals otherwise the information supplied by only one language cannot be understood by monolingual speakers of the other language. This, however, is a purely pragmatic reading and work on ancient and modern linguistic landscapes indicates that signage may not be designed to maximize readership or even to be read by anyone at all and that the frequency of language use on the signs may not reflect the demographics and practices of their presumed readers. For instance, in 2009, in the Latvian city of Rezekne, Russians constituted 49% of the city's population, and 93.5% of the population was competent in Russian; Russian language, however, was present only in 7.7% of the signs (while English was present on 28.9% of the signs) (Marten, 2010). The near-invisibility of Russian is a direct outcome of Latvian language policy that disallows the use of Russian in the public sphere.

The high frequency of English documented by Marten (2010) also raises questions with regard to comprehensibility of particular languages and scripts. Studies in other post-Soviet countries show that the use of English and Latin script by businesses is often aspirational and aims to index cosmopolitanism and prestige in the context of low levels or even non-existent English-language competence, especially among the older generation (Bilaniuk & Melnyk, 2008; Pavlenko, 2009; Sadikhova & Abadi, 2000) (Figures 3 and 4). In other cases, the viewers may be fluent in the language but unfamiliar with the script. In Azerbaijan, for instance, the

Figure 4. Urban Espresso, a coffee kiosk, Kyiv, August 2014. Picture by A. Pavlenko.

reform that shifted the script from Cyrillic to Latin made new Azeri signs incomprehensible to the older generation, unfamiliar with the Latin script (Sadikhova & Abadi, 2000). Examples of such usage also appear in the Roman Empire, where milestones were set up in Latin in regions, especially in the East, where Latin speakers and readers would have been few and far between. Their key purpose was to index Roman control, as starkly illustrated by the milestones which simply made reference to the Emperor and not to any practical information for travellers.

Nor can we even always assume familiarity with the language(s) on the part of the sign's authors or producers. Studies of modern linguistic landscapes document errors and misspellings indicative of such unfamiliarity in local languages with limited circulation, such as Irish (Spalding, 2013) and in 'tourist languages', where the signs are often produced with the help of Google Translate. Errors and misspellings indicating lack of familiarity with the language have also been documented in the Roman Empire, and stock formulaic phrases inappropriately deployed suggest that manuals may have been in circulation and not always in the hands of the fully literate (Cooley, 2012: 291–2).

The links between language choice, types of information arrangement, competencies of the authors and communicative practices of the local populations are undoubtedly highly contextually dependent. The same signs may appear both monolingually and bilingually within broadly the same linguistic but different socio-political contexts. In the Roman Empire, Augustus's *Res Gestae* (his 'CV',

Figure 5. The temple of Rome and Augustus, Ancyra. Picture by G. Ramsey, reproduced with kind permission.

originally set up in bronze in front of his mausoleum and subsequently melted down) was displayed in Latin at Rome, and is now known from three main ancient copies set up in Roman Galatia, plus a fragment from Sardis (Thonemann, 2012). In the provincial capital of Galatia, Ancyra, the inscription was displayed in Latin (inside) and Greek (outside) on the temple of Rome and Augustus (Figure 5); at Apollonia the Greek-only text covered a large base for statues; in Antioch the Latin-only text probably adorned a gateway to a temple to Augustus. Although the same message was promoted in each case, the linguistic decisions were attuned to the circumstances, for example, Ancyra as provincial capital had to reach, even if only symbolically, the largest audience, Apollonia was more 'provincial' and Antioch was keen to present itself as a miniature Rome ever since it had been re-founded by Augustus as a veteran colony (Cooley, 2009).

Figure 6. Latin-Punic bilingual inscription related to the paving of the *forum*, Lepcis Magna (AD 53/54). Picture by A. Wilson, reproduced with kind permission.

Bilingual texts with duplicated (or parallel) versions allow for a variety of interpretations. In Ireland and Wales, for instance, in some areas at least, bilingual signage often indexes an 'aspirational ideology' of 'true bilingualism' in the context where monolingual English speakers are a majority and bilinguals a minority (Coupland, 2010; Spalding, 2013). A similar interpretation is usually extended to bilingual signage in Belarus, where Russian is used on an everyday basis and Belarusian plays a largely symbolic role. Yet the difference is that Belarusian and Russian are closely related Slavic languages, as a consequence Belarusian is more or less comprehensible to Russian speakers and thus can carry informational functions (Brown, 2007; Giger & Sloboda, 2008).

Non-parallel bilingual texts with fragmented, overlapping or complementary arrangements might appear a more certain indicator of bilingualism among the assumed readers, yet this is not always the case either. In the Roman world, non-parallelism often emerged from ways in which texts were adapted to non-Latin reading / speaking local audiences and realities. Before Punic was completely pushed out by the end of the first century AD by Latin on building inscriptions from Roman Tripolitania, in an inscription recording the paving of the Old Forum at Lepcis Magna we find the Punic version relegated to the bottom fifth of the stone, lightly incised rather than in bronze lettering like the Latin and focusing only on the contribution of the local notable, not the wider imperial context (Wilson, 2012) (Figure 6). This example is one of attunement to local informational needs, but bilingual texts with asymmetrical information arrangements are also put up in contexts where large groups of monolinguals are deliberately excluded; both strategies mean that these texts should not be unquestioningly seen as evidence for widespread multilingualism of the community or individuals.

The complexities and idiosyncrasies of strategies employed in writing in multilingual landscapes cannot be easily grasped by universalizing typologies and interpretive models. Nevertheless the inevitably reductive process of typologizing and modelling might be useful in attempting to identify tendencies and norms against which unusual features can be read and in reminding us of the implicit knowledge we bring to our analyses. Interpretive models, if complex and sophisticated, might be particularly valuable for those ancient historians who strive to understand settlements which are only known through their epigraphical remains (Mullen, 2013). Reconstructing 'from signs to practices to people' might not really be what modern linguistic landscapers do, despite some claims to the contrary, but is often effectively the task of many historically minded epigraphers.

4. Conclusions

Together, the cases discussed here remind us that linguistic landscapes are not exclusively modern phenomena and that our interpretation of these phenomena is diachronic in nature and contingent on preceding signs. We have argued that this diachronicity needs to be explicitly acknowledged in the study of linguistic landscapes, because, in many cases, the functions of individual signs and the reasons behind the choices of language are impossible to interpret from a synchronic perspective. In the post-Soviet settings, for instance, the analysis of signs in the context of other concurrent signs obscures the dramatic change in the formats, functions, and languages of the signage that took place in the 1990s, with the emergence of new capitalist economies and attempts by new ethno-nationalist states to eliminate Russian from the signs despite the continuous presence of its speakers (Pavlenko, 2009). The phenomenon of the removal of languages from public writing also reminds us that our analyses cannot be limited to the languages and texts present in the signage — we also need to consider the absences and to ask questions about who did not find their languages and voices reflected in the public space, why, and with what consequences. This caution as to what might be missing might be more obvious in dealing with the past, especially the distant past, but the phenomena of illiteracy, marginalization and state silencing are not consigned to history.

The integration of a temporal dimension in the study of linguistic landscapes enables us to examine linguistic landscapes as a site of social, political and economic changes, yet it also requires us to move away from the reassuring completeness of the temporary status quo into the murky waters of partial and often decontextualized evidence, where, in the absence of authors and addressees, we are forced, literally, to 'read back' from the signs. Such reading, in turn, requires us to make our assumptions explicit and to articulate the analytical procedures. Most importantly, it pushes sociolinguists to engage in an interdisciplinary dialog with researchers of the past about ways in which words and texts became constitutive of urban spaces and what, if anything, may be genuinely new about contemporary linguistic landscapes.

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References

Adams, J.N. (2003). *Bilingualism and the Latin language*. Cambridge: CUP. DOI: 10.1017/CBO9780511482960

Adams, J.N., Janse, M., & Swain, S. (Eds.). (2002). *Bilingualism in ancient society. Language contact and the written text*. Oxford: OUP. DOI: 10.1093/acprof:oso/9780199245062.001.0001

Backhaus, P. (2007). *Linguistic landscapes: A comparative study of urban multilingualism in Tokyo*. Clevedon: Multilingual Matters.

Baird, J., & Taylor, C. (Eds.). (2011). *Ancient graffiti in context*. London: Routledge.

Bérard, F., Feissel, D., Laubry, N., Petitmengin, P., Rousset, D., Sève, M. et al. (2010). *Guide de l'épigraphiste. Bibliographie choisie des épigraphies antiques et médiévales*. Paris: Publications aux P.E.N.S.

Ben-Rafael, E., Shohamy, E., Amara, M., & Trumper-Hecht, N. (2006). Linguistic landscape as symbolic construction of public space: The case of Israel. *International Journal of Multilingualism*, 3(1), 7–30. DOI: 10.1080/14790710608668383

Bilaniuk, L., & Melnyk, S. (2008). A tense and shifting balance: Bilingualism and education in Ukraine. In A. Pavlenko (Ed.), *Multilingualism in post-Soviet countries* (pp. 66–98). Bristol: Multilingual Matters.

Blommaert, J. (2013). *Ethnography, superdiversity, and linguistic landscapes: Chronicles of complexity*. Bristol: Multilingual Matters.

Bodel, J. (Ed.). (2001). *Epigraphic evidence: ancient history from inscriptions*. London: Routledge.

Brosch, T., Pourtois, G., & Sander, D. (2010). The perception and categorization of emotional stimuli: A review. *Cognition & Emotion*, 24(3), 377–400. DOI: 10.1080/02699930902975754

Brown, A. (2007). Status language planning in Belarus: An examination of written discourse in public spaces. *Language Policy*, 6, 281–301. DOI: 10.1007/s10993-007-9048-5

Bucking, S. (2012). Towards an archaeology of bilingualism: On the study of Greek-Coptic education in late antique Egypt. In A. Mullen & P. James (Eds.), *Multilingualism in the Graeco-Roman worlds* (pp. 225–264). Cambridge: CUP. DOI: 10.1017/CBO9781139012775.011

Burrell, B. (2009). Reading, hearing, and looking at Ephesos. In W. Johnson & H. Parker (Eds.), *Ancient literacies: The culture of reading in Greece and Rome* (pp. 69–95). Oxford: OUP.

Cooley, A. (2009). *Res gestae divi August. Text translation, and commentary*. Cambridge: CUP.

Cooley, A. (2012). *The Cambridge manual of Latin Epigraphy*. Cambridge: CUP. DOI: 10.1017/CBO9781139020442

Cotton, H., Hoyland, R., Price, J., & Wasserstein, D. (Eds.). (2009). *From Hellenism to Islam: Cultural and linguistic change in the Roman Near East*. Cambridge: CUP. DOI: 10.1017/CBO9780511641992

Coupland, N. (2010). Welsh linguistic landscapes 'from above' and 'from below'. In A. Jaworski & C. Thurlow (Eds.), *Semiotic landscapes: Language, image, space* (pp. 77–101). London: Continuum.

Dehaene, S. (2009). *Reading in the brain: The science and evolution of a human invention*. New York, NY: Viking.

Donald, M. (2001). *A mind so rare: The evolution of human consciousness*. New York, NY: W. Norton & Company.

Eck, W. (2009). The presence, role, and significance of Latin in the epigraphy and culture of the Roman Near East. In H. Cotton, R. Hoyland, J. Price, & D. Wasserstein (Eds.), *From*

Hellenism to Islam: Cultural and linguistic change in the Roman Near East (pp. 15–42). Cambridge: CUP. DOI: 10.1017/CBO9780511641992.003
Giger, M., & Sloboda, M. (2008). Language management and language problems in Belarus: Education and beyond. In A. Pavlenko (Ed.), *Multilingualism in post-Soviet countries* (pp. 41–65). Bristol: Multilingual Matters.
Henkin, D. (1998). *City reading: Written words and public spaces in antebellum New York*. New York, NY: Columbia University Press.
Holder, N. (2007). Mapping the Roman inscriptions of London. *Britannia*, 38, 13–34. DOI: 10.3815/000000007784016359
Huebner, T. (2006). Bangkok's linguistic landscapes: Environmental print, codemixing, and language change. *International Journal of Multilingualism*, 3(1), 31–51. DOI: 10.1080/14790710608668384
Huntley, K. (2011). Identifying children's graffiti in Roman Campania: A developmental psychological approach. In J. Baird & C. Taylor (Eds.), *Ancient graffiti in context* (pp. 69–89). London: Routledge.
IRT2009 = *Inscriptions of Roman Tripolitania*, by J.M. Reynolds & J.B. Ward-Perkins, enhanced electronic reissue by G. Bodard & C. Roueché (2009). Retrieved from <http://inslib.kcl.ac.uk/irt2009/> (27 November 2014).
Kallen, J. (2009). Tourism and representation in the Irish linguistic landscape. In E. Shohamy & E. Ben-Rafael (Eds.), *Linguistic landscape: Expanding the scenery* (pp. 270–283). London: Routledge.
Keegan, P. (2014). *Graffiti in antiquity*. London: Routledge.
Landry, R., & Bourhis, R. (1997). Linguistic landscape and ethnolinguistic vitality: An empirical study. *Journal of Language and Social Psychology*, 16, 23–49. DOI: 10.1177/0261927X970161002
Leeman, J., & Modan, G. (2009). Commodified language in Chinatown: A contextualized approach to linguistic landscape. *Journal of Sociolinguistics*, 13(3), 332–362. DOI: 10.1111/j.1467-9841.2009.00409.x
Marten, H. (2010). Linguistic landscape under strict state language policy: Reversing the Soviet legacy in a regional centre in Latvia. In E. Shohamy, E. Ben-Rafael, & M. Barni (Eds.), *Linguistic landscape in the city* (pp. 115–132). Bristol: Multilingual Matters.
Mullen, A. (2013). *Southern Gaul and the Mediterranean: Multilingualism and multiple identities in the Iron Age and Roman periods*. Cambridge: CUP. DOI: 10.1017/CBO9781139105743
Mullen, A. (Forthcoming). Sociolinguistics. In M. Millett, L. Revell, & A. Moore (Eds.), *The Oxford handbook of Roman Britain*. Oxford: OUP.
Mullen, A., & James, P. (2012). *Multilingualism in the Graeco-Roman worlds*. Cambridge: CUP. DOI: 10.1017/CBO9781139012775
Pavlenko, A. (2009). Language conflict in post-Soviet linguistic landscapes. *Journal of Slavic Linguistics*, 17(1-2), 247–274. DOI: 10.1353/jsl.0.0025
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* (pp. 133–150). Bristol: Multilingual Matters.
Pavlenko, A. (2012). Transgression as the norm: Russian in linguistic landscape of Kyiv, Ukraine. In D. Gorter, H. Marten, & L. Van Mensel (Eds.), *Minority languages in the linguistic landscape* (pp. 36–56). Houndmills: Palgrave Macmillan.

Reh, M. (2004). Multilingual writing: A reader-oriented typology – with examples from Lira municipality (Uganda). *International Journal of the Sociology of Language*, 170, 1–41. DOI: 10.1515/ijsl.2004.2004.170.1

Sadikhova, F., & Abadi, M. (2000). Where's the Azeri? Trends among store signs in Baku. *Azerbaijan International*, 8(1), 38–39.

Scollon, R., & Scollon, S.W. (2003). *Discourses in place: Language in the material world*. London: Routledge. DOI: 10.4324/9780203422724

Sears, G., Keegan, P., & Laurence, R. (Eds.). (2013). *Written space in the Latin West, 200 BC to 300 AD*. London: Bloomsbury.

Sebba, M. (2014). The visual construction of language hierarchy: The case of banknotes, coins and stamps. *Journal of Language and Politics*, 12(1), 101–125. DOI: 10.1075/jlp.12.1.05seb

Sloboda, M. (2009). State ideology and linguistic landscape: A comparative analysis of (post) communist Belarus, Czech Republic and Slovakia. In E. Shohamy, & E. Ben-Rafael (Eds.), *Linguistic landscape: Expanding the scenery* (pp. 173–188). London: Routledge.

Spalding, T. (2013). *Layers: The design, history and meaning of public street signage in Cork and other Irish cities*. Dublin: Associated Editions.

Thonemann, P. (2012). A copy of Augustus' *Res gestae* at Sardis. *Historia*, 61(3), 282–288.

Wilson, A. (2012). Neo-Punic and Latin inscriptions in Roman North Africa: Function and display. In A. Mullen & P. James (Eds.), *Multilingualism in the Graeco-Roman worlds* (pp. 265–316). Cambridge: CUP. DOI: 10.1017/CBO9781139012775.012

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