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Language choice, language alternation and code-switching in the Mercator-Hondius Atlas

The atlas of Gerardus Mercator (Gerard de Cremer), or the *Atlas sive cosmographicae meditationes de fabrica mundi et fabricati figura*, is one of first modern atlases and one of the most famous of those compiled in the Netherlands (for general accounts of the atlas, see Keuning 1947; van der Krogt 1997, 2015). The first (unfinished) edition was published in 1595, but the copperplates were later acquired by Jodocus Hondius (Joost de Hondt) and his business associates. The revised Mercator-Hondius Atlas was published for the first time in 1606 with added maps and texts. The texts printed *on verso* of the maps were written by Petrus Montanus (Pieter van den Berg), who was a brother-in-law of Hondius and a Latin teacher. Many subsequent editions of the atlas were produced in the years that followed. The first editions were in Latin, but versions in European vernaculars such as French, German and Italian were produced later as well.

The present article focuses on the multilingual nature of the Mercator-Hondius Atlas (1613, *editio quarta*) by discussing language choice, language alternation and code-switching patterns in different parts of the atlas.[1] The dominant language of the descriptive texts is Latin, but there are also switches into many other languages, including Greek (written in Greek script) and several vernaculars. Furthermore, the map pages tend to indicate the names of different types of area (e.g. cities, seas, and oceans) in different languages. The aim of the present article is to provide a preliminary exploration of the possibilities of approaching the atlas with the aid of concepts and ideas derived from modern code-switching studies. I demonstrate how these concepts can be used to describe the language choice patterns in the text and discuss some of the challenges the data poses for a linguistic approach.

Introduction: recent research on multilingual features in historical texts

The study of multilingualism and related phenomena has been a popular topic in linguistics and its neighbouring fields, especially since the 1950s. Perhaps the one feature which has received the most attention in this period has been code-switching, defined variously as, for example, 'the juxtaposition within the same speech exchange of passages belonging to two different grammatical systems or subsystems' (Gumperz 1982: 59) or '[t]he mixing of languages within one communicative event (or stretch of discourse/text), be it spoken or written' (Schendl and Wright 2011b: 23). In many of the earlier studies, the focus was on bilingualism as a more general phenomenon, while research on code-switching (henceforth CS) was on the rise from approximately the 1970s onwards. The earlier studies focussed almost exclusively on spoken language and 'true' bilinguals,[2] but during the past 25 years or so, research on CS in written materials has become quite common.

The focus of CS studies has varied over the years, but perhaps the most prominent areas of interest have

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2   The meaning of 'true' bilingualism is itself rather elusive (see Romaine 1995: 12–19). For a discussion of different types of multilingualism, see Stavans and Hoffmann 2015: 141–2.

The Mercator-Hondius Atlas.

been the grammatical constraints on CS (see, e.g., Myers-Scotton 1993a, 2002; Matras 2009: 129–36; MacSwan 2014) and the functions of CS (Gumperz 1982; Myers-Scotton 1993b; Gardner-Chloros 2009: 42–88; Matras 2009: 114–29). A related problem has been to define CS in such terms as to demarcate it from similar phenomena, such as borrowing (lexical or otherwise) and interference. Traditionally, many researchers have divided CS into at least two categories: intrasentential and intersentential. The former refers to switching which takes place within a sentence (or a clause), while the other refers to switching at sentence boundaries. Some researchers have preferred to limit CS (or 'true' CS) to intrasentential switching, and some have gone even further by leaving aside single lexeme switches (see, e.g., Poplack 1980; for discussion, see Myers-Scotton 1993a: 176–7; Matras 2009: 106–14). These views may differ according to the focus of the study, as syntactic constraints are *ex definitione* limited to intrasentential switching. In discourse-oriented studies it is more

common to consider both types of CS, but even then it seems rather common to leave out single lexemes since they are difficult to distinguish from borrowings. A detailed discussion is beyond the scope of the present study; here, I will consider both individual foreign-language lexemes and longer constituents or stretches of discourse.

Research on historical CS (i.e. CS in historical texts) has become a field of its own quite recently. Many pioneering studies were published especially in the 1980s and 1990s, but it was only at the turn of the millennium that the field took shape in earnest (for brief surveys, see Schendl and Wright 2011a: 1–4; Schendl 2012: 29–30; Schendl 2015). This can be seen in the eventual publication of edited volumes and book-length discussions, as well as in the standardisation of terminology and methodology adopted from studies of contemporary CS and multilingualism. Especially prominent has been the work done in the context of the history of English and the history of the classical languages (see Skaffari and Mäkilähde

2014: 253–5 for discussion). The depth and breadth of research is evident in the many collected volumes and monographs devoted to these topics. Studies have been conducted on various text-types and genres, both literary and non-literary.[3] Most of the earlier studies have been clearly data-driven, and one central concern has been to explain why certain languages are used in certain contexts and why switching between them occurs (cf. Schendl 2002: 56). Some studies have relied on mostly philological methods (e.g. Wenzel 1994) while others have applied current sociolinguistic or pragmatic theories (e.g. Davidson 2003, Putter 2011, Mäkilähde in review).

Although historical CS may be approached from the point of view of speech or language systems, the data always consist of written sources. Lately, the study of contemporary written CS has also become more popular, and in particular the scope has widened from literary texts to non-literary ones as well as to electronic discourse, multilingual signs, and various other text-types. It has indeed been suggested that the existing theories and methodologies are not sufficient for researching written CS, and that new theories need to be developed specifically for such data (e.g. Sebba 2012). I would argue, however, that the existing models only need to be modified by applying insights derived from studies of written discourse, instead of replacing them completely (see Mäkilähde 2013). I will discuss some of the problems posed by written text for CS studies below. As for the applicability to historical contexts of theories developed for the analysis of modern settings, it should be stressed that there is nothing particularly 'modern' about CS. Furthermore, theories of language use aim at a high level of generality, and any general theory should at least in principle be applicable to both past and present settings.

Language choice and code-switching in early modern scientific and scholarly discourse

As is well known, Latin was the pan-European lingua franca of scientific and scholarly discourse for a long time.[4] Although the use of vernaculars in scientific writing became more and more popular during the early modern period (especially in those fields with popular or utilitarian appeal such as medicine and astrology), Latin was still the language to use if one wanted to reach as wide an international audience as possible, unless one was willing to produce several editions in different languages. This was also the case with maps aimed at either a scholarly or an international audience, or both (Woodward 2007: 16). Even in vernacular scientific and scholarly texts, and generally in any discourse on science, Latin was often present in the form of CS used for specific functions (e.g. Pahta 2011; cf. Pahta and Nurmi 2006: 213–16; Nurmi and Pahta 2010: 146–51). In particular, quotations from eminent authors might be reproduced in their original Latin form, perhaps with a translation or a paraphrase in the vernacular. Similarly, technical or scientific terms might appear in their original form, or alternatively they could be borrowed into the vernacular with structural modification.[5] This practice survives in modern scientific and scholarly discourse as well.

Latin scientific texts were not immune to multilingual influences either (Schendl 2000: 83). First, switches into vernaculars could be used for similar purposes as switches into Latin in vernacular texts (e.g. for quotations and terms). Second, other scholarly languages could also be used, in particular Greek, Hebrew and Arabic, but the choice would of course depend on the topic of the text and the author's linguistic competence. Third, as with Latin CS in a vernacular text, switches could be translated in order to accommodate the needs of potential readers who were not proficient in some of the languages.

It is noteworthy that the kind of multilingualism discussed here is very easily overlooked, perhaps because it is so obvious that there is one dominant 'base language' in the text, and most foreign-

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3 The various text-types and genres studied from a historical CS perspective include legal and documentary texts (e.g. Schendl 2011, Trotter 2011), business writing (Wright 2011), scientific and medical texts (Voigts 1996, Pahta 2004, Meecham-Jones 2011), religious texts (Wenzel 1994, Pahta and Nurmi 2011), letters (Swain 2002, Adams 2003, Nurmi and Pahta 2012, Mäkilähde and Rissanen forthcoming), drama (Diller 1997/8; Mäkilähde in review), and poetry (Davidson 2003, Putter 2011).

4 For an overview of the role of Latin in early modern Netherlands in particular, see Sacré 2015. For CS in medieval scientific texts, see Voigts 1996, Pahta 2004.
5 Such borrowings are sometimes called cultural borrowings, since they 'represent objects or concepts new to the [borrowing] culture' (Myers-Scotton 1993a: 169).

language items may either have been flagged somehow (e.g. by being visually or verbally marked as quotations or foreign items) or consist of ambiguous or unclear cases such as proper nouns. For example, Cornelis Koeman *et al.* (2007: 1325) state that '[t]he ten successive editions [i.e. after the first edition] of the Mercator-Hondius Atlas were in only Latin or French', but of course the atlas is not monolingual in Latin. This is not meant as criticism; rather, this merely exemplifies how we usually approach texts where one of the languages is clearly dominant. Although they differ from texts where switching is constant, the difference may be merely one of degree.

Code-switching in written texts and the problems posed by an atlas

As I argued above, theories and methods originally developed for the analysis of spoken CS are in most cases applicable to the written medium as well. If one is specifically interested in the spontaneous nature of conversational CS, the more 'planned' and less ephemeral nature of a written text may make it unsuitable for analysis, but for a philological or a pragmatic approach these features pose fewer problems. Furthermore, some forms of written communication, such as correspondence, exhibit several speech-like properties.

Language choice in general can be addressed from both macro and micro-level perspectives. Interactants may choose to use one language in a specific setting or situation, and these choices may be connected to the practices of the wider community. In other words, it may be a community practice that a particular language is used in a particular context. In the early modern period, examples would include the use of Latin as the language of the Catholic mass, and the use of Latin as the lingua franca of science and scholarship (cf. above). In addition to such macro-level choices, interactants may also choose to use a particular language within a particular interactive event in order to achieve a special effect. John Gumperz (1982: 60–1) refers to this kind of micro-level CS as metaphorical, and to the macro-level CS as situational. Although there are problems with this division (see, e.g., Myers-Scotton 1993b: 52–5), it provides a sufficiently appropriate point of departure.

One specific problem of CS research in general is identifying switch-sites. As mentioned above, Gumperz defined CS as the use of two linguistic codes 'within the same speech exchange' (1982: 59). However, this would mean that situational CS is not CS at all, since it takes place between two different communicative episodes or speech exchanges. In other words, Gumperz's general definition of CS only applies to metaphorical CS, which indeed does take place within a single communicative episode. Furthermore, although many definitions of CS refer to a communicative episode or a similar concept, it is not clear what constitutes a change in such an episode. For example, is a change in topic or a change in the participant constellation sufficient? In the case of written discourse, identifying a communicative episode is even more complicated. For example, in the case of a book, does the communicative episode cover the whole book or each of its texts separately? Herbert Schendl and Laura Wright (2011b: 24) seem to opt for the latter alternative since they do not analyse switches between two separate texts as CS. However, even within a single text it may be difficult to decide where the switches actually occur. For example, if the section headings of a text are in one language and the main text in another, does this constitute CS? A distinction can also be made between complementary texts, where the languages convey different information, and parallel texts (or bilingual texts; see Adams and Swain 2002: 7), where approximately the same content is conveyed through both languages (Sebba 2012: 14–15).

Compared to what might be considered a typical book in linear prose, an atlas is a rather complex construction. David Woodward provides the following description:

> In the syntax of the map, it is also possible to distinguish between cartographic and epicartographic elements. Both contribute to the meaning of the whole map, and one is not more important than the other. Cartographic elements are graphic signs within the map frame or on the map plane and can be transformed by generalization and projection, while epicartographic elements are not subject to graphic generalization or projection and lie outside the graphic space or layer of the map. Epicartographic elements include inscriptional names, labels, legends, scales, orientation devices, titles, dedications, notes to the reader, decorative items, or descriptive text about map features. (Woodward 2007: 16)

From the point of view of linguistics, there is a clear difference between those elements which appear as simple labels and those which constitute longer texts. For example, dedications and expository or introductory texts are fairly straightforward to approach. The actual maps, however, pose more problems. Unlike the prose descriptions, there is no clear 'main text', and in general the structure is less transparent (cf. Sebba 2012: 11–17 for similarly complex text types).[6] One possible way to bring structure to the text is to distinguish between text used to identify geographical features and text used to guide the reader in interpreting the map. Deciding on how to interpret the possible structural layers of the former type seems more arbitrary. One fairly natural way to approach it would be to treat each type of geographical location as a separate layer: names of towns and cities, names of rivers, names of oceans, names of continents, and so forth. In addition, one may wish to consider the visual features of text in order to ascertain if any particular levels are marked in a certain way (e.g. by using a specific kind of typeface, using only capital letters, and so on). Although it may be misleading to refer to changes in the language on one of these layers or between the layers as CS, it does at least constitute a juxtaposition of languages. I will refer to this as language alternation, a term which is variously used in CS literature.[7]
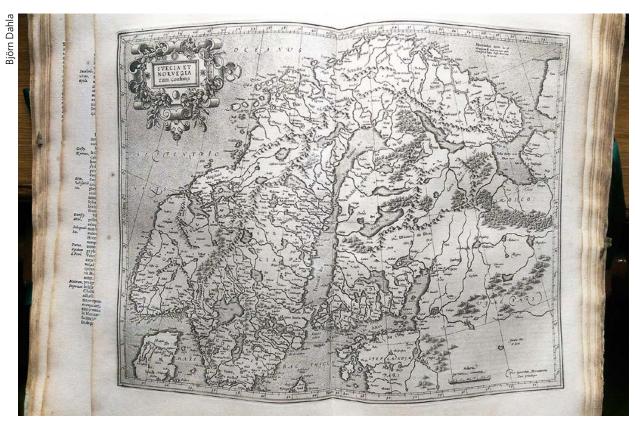
Language alternation in the maps

In this section, I offer some remarks on how the dominant role of Latin is reflected in the language of the map leaves and how the several languages structure the maps. A full discussion is beyond the scope of the present article, and I have selected only a handful of maps to be examined. The first of these is the map of the British and Irish Isles. To begin with the 'highest' level of discourse, all metatextual elements (i.e. elements which, in a sense, frame the main text and guide the reader's interpretation) are in Latin, namely the main title (Anglia, Scotia et Hibernia), the titles of lists of names which could not be fitted onto the map (Nomina aliquot quę suis orbiculis asscribere loci angustia prohibuit), the cardinal directions

(Oriens, etc.), the title of the scale line (Miliaria Anglica parua), and the licence with the name of the author (Per Gerardum Mercatorem Cum Priuilegio). Since the metatext guides the reader in using the map, it seems logical to argue that the 'main' language of the map is Latin. Furthermore, almost all 'macro level' elements are in Latin, including oceans (e.g. Oceanvs Germanicvs, Occidentalis oceanvs), seas (Hibernicvm mare), countries (e.g. Anglia), parts of countries (e.g. Norvegiae pars), and major islands (e.g. Orcades, Leuissa, Mania Insula). However, the choice of language is not entirely consistent, since the names of some larger areas are in vernaculars (e.g. Seelant, Brabant and Picardie, instead of the Latin forms), as are the names of small islands (e.g. Wight).[8] Names of towns and cities seem to be consistently in vernaculars, coinciding roughly with the language of the area in question.[9]

In the more detailed maps of the region, the same general principles are in place, but there is more variation with certain types of geographical areas. On the first map of Ireland (Irlandiæ regnum), some aquatic areas have vernacular names (e.g. Erne Lough, Loug Eag, Galway bay), some are in a mixture of vernacular and Latin (e.g. Ree Lacus, Corbes lac.), and some are ambiguous (e.g. L. Foyle). On the fourth map of Ireland (Vltoniae orientalis pars), 'Lough Erne' is again in the vernacular, but 'Lacus Eagh' is in a mixture. On the first map of England (Anglia regnum), some of the inconsistencies of the initial map are alleviated again by the use of mixed constituents (e.g. Portland insula, Wight ins.; similarly on the first map of Scotland, e.g. Yla insula, Hebrides insulæ).[10] Names of areas above the town level (counties and so on) are variably in Latin or a vernacular; it seems that areas in Wales have more vernacular names (e.g. Cardigan, Glamorgan) while most regions in England seem to have Latin names (e.g. Essexia, Cantium, Somersetus). On all the maps of England, river names seem to be in a mixture of

6   Cf. Schendl (2012) on the special nature of place names and proper nouns in general.
7   Cf. Auer (1995: 116) on the term code-alternation, which does not refer to the same phenomenon.

8   On the map of Zealand titled 'Zelandia Comitatus', the Latin forms of Zealand and Brabant are used.
9   For the distinction between toponyms (i.e. place names in the language of the area in which they are located) and exonyms (i.e. place names not in the language of that area), see, e.g., van den Broecke (2009: 17, 145).
10 'Hebrides' is an ambiguous form, but it is most likely Latin. It is also the same form as 'Orcades', which occurs in close conjunction.

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The map of Scandinavia.

the vernacular and Latin (e.g. Twede flu., Tyne flu. on the second map), but on the sixth map (Warwicum etc.), we find one river name in Latin only (Tamessis flu.).

If we compare the map of the British and Irish Isles to that of Scandinavia (Svecia et Norvegia cum confinijs), the latter seems to exhibit even more variation. Metatextual units are consistently in Latin, but aquatic areas are not as consistent any more. The single ocean is in Latin (Oceanus septentrionalis), and so is one of the seas (Mare Balthicum). The others show interesting variations: the White Sea is marked with its Russian name in the Latin alphabet (but not in an italic font as most of the other place names), followed by its Latin translation with a meta-comment ('Bella more id est Album mare'). Similarly, the main part of the Barents Sea (i.e. the Murmansk Sea) contains the same structure but the translation is explained as being the Scandinavian word for the area ('Myrmanskoi more hoc est Noruegicum & Danicum mare quia Noruegos & Danos Russi Mowremans uocant'). The Gulf of Finland is in Latin (Finnicus sinus), while the two seas between Finland and Sweden are in German (Finnisch see, Botner see). Most lakes, however, are in a mixture

(e.g. Holela lac., Ladoga lac, Meler lac.). The towns of Finland show some interesting variation as well; in addition to the clearly Swedish names (e.g. Kyro, Karis, Abo), 'Helsingia' appears in Latin.[11]

A further different system is used on the first map of Switzerland (Helvetia cum finitimis regionibus confœderatis). The vernacular is used more extensively; for example, the cantons have German names (e.g. Argow, Zvrichgow, Tvrgow), and so have the lakes or seas (e.g. Zuricher see, Der Boden see, Der Geneuer see). The rivers, however, still use either the mixed system or Latin forms (e.g. Rhenus flu., Lech flu., La Venoge flu.). Neighbouring countries are also in Latin, as in the other maps discussed here (e.g. Sueuię pars, Burgundiæ pars). Finally, it needs to be mentioned that the main titles are not always in monolingual Latin either. For example, the map of Holland is titled 'Hollandt comitatus Vtricht episcop:' and the main map of France is titled 'France Picardie champaigne cum regionibus adiacentibus', where these forms are also used to mark the locations themselves.

11 The Swedish province of Helsingia appears on the same map.

Based on the evidence discussed above, some general observations can be made. First, the maps are clearly not monolingual and definitely not in only Latin, or even in Latin and a single vernacular per map. It is more accurate to say that the maps are in Latin with regard to language choice in metatextual units, but even this is not completely true due to the sporadic use of vernacular names in some titles. However, it is true that even in those cases Latin seems to be the main language of the structures, whether they are phrases or sentences. Second, although certain types of geographical locations tend to be in Latin, there is variation both within individual maps and between them. In general, language alternation does seem to structure the maps, but this only applies near-categorically in the sense that the highest level of organisation seems to be in Latin, while the names of cities and towns at least are for the most part in the vernaculars. Third, the mixed constituents which appear at least in conjunction with lakes and rivers merit further consideration. They are similar to what can be called compromise strategies: a somehow marked structure is created in order to make the element conform to the grammar of the main language, in this case Latin (cf. Gumperz 1982: 87–9; Myers-Scotton 2002). However, their syntactic behaviour is impossible to observe in this context since the items appear individually, not embedded in sentences.

It is important to bear in mind that, from the point of view of linguistics and pragmatics, the original source of the individual forms may not be as relevant as the juxtaposition of the languages on the page. Yet in a full account of the phenomenon, it would be beneficial to track down the history of every form on a map in order to find out to what degree they derive from the author's deliberation and to what extent they have been merely copied without further consideration. Established Latin forms were presumably not available for all towns, for example. One could also approach this variation from the point of view of language and power in order to find out if language alternation plays a part in constructing a specific view of the world (cf. Turnbull 1996). From this perspective, for example, Latin could be seen as the language which unites regions while vernaculars could be seen as languages which divide regions and mark them as belonging to larger areas where those vernaculars are spoken.
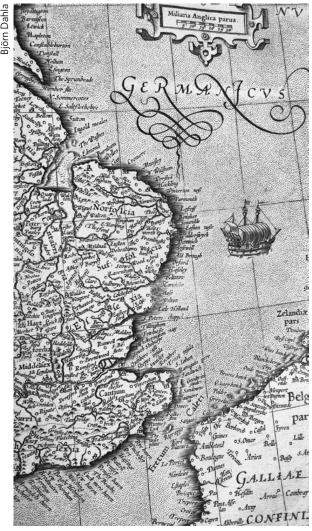
Code-switching in the prose descriptions

In this section, I focus on the descriptive texts in order to provide a brief overview of the CS patterns in them. As was the case with the map leaves, I have selected only a few examples to be discussed. Compared to the maps, it is much less controversial to state that the language of these texts is Latin since it is clearly the dominant language throughout and the use of other languages is rather limited. Yet it is notable that although other languages appear mainly in the form of single lexemes, they are by no means infrequent.

One of the main occasions for the use of several different languages is the discussion of etymologies. For example, the name of Britannia is explained as deriving from Celtic: 'Quia autem olim Britanni omnes se glasto inficerent, quod cæruleum efficiebat colorem … ijdemque quicquid depictum & coloratum *Brith* patria & antiqua lingua appellarent', although a suggestion had also been made to derive it from the Greek πρυτανεῖα (MHA: 45). Greek is also used in conjunction with the etymology of Albion's name (Alij ab Αλφον [*sic*] malunt deducere), and the identification of the Land's End (Ptolemæus vocat ἀντιουέσταιον ἢ βολέριον.) (*ibid.*). Greek and Celtic also appear for example in the following discussion of the name of Ireland: *Hibernia*, *Iuverna* & οὐερνία procul dubio ab Orphei & Aristotelis *Ierna* dimanarunt, *Ierna* autem illa, *Iris*, *Iuerdhond*, & *Irelan* [*sic*], ab Incolarum *Erin*. (MHA: 47). The same types of lists with various different languages are found throughout the atlas.[12]

One rather interesting case of the use of a vernacular in an etymology is provided at the beginning of the text on England. It is mentioned that Goropius derived the name *Anglia* from *angle* in the sense of 'fish hook' as the English were supposed to be good fishermen: 'Goropius Anglos ab *Angle* I. hamo piscatorio deducit, quod, ut inquit ille, omnia sibi adhamarent & fuerint, ut Angli loquuntur, *Good Anglers*, I. boni hamatores' (MHA: 63). Note that the English expressions are accompanied by translations, while the instances of Greek CS occur without any paraphrase or translation, or in other words what Diller (1997/8) calls support. The syntax of this sentence is also worth noting; the English forms (rather than the translations) can be safely said to be the

12   Cf. van den Broecke (2009: 31) on scholarly lists of variants for place names in Ortelius' atlas.

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Detail from the first map of Engand.

main forms since the Latin translations are appositives preceded by *id est*, but the English forms are not morphologically integrated into the Latin frame. Instead, the translations carry the necessary morphological markers. In the case of 'boni hamatores', although the English form marks plurality, the nominative is required for a perfect fit.

Sometimes a switch is made in order to provide the vernacular and other names for a particular place or a term without any etymological discussion, as in the following examples: 'Plurimisque in locis lapides illi *Lithanthraces*, quos *Sea-coales* Angli vocant, magna copia effodiuntur' (MHA: 65), 'Vrbs primaria hujus provinciæ *Durovernum*, Ptol. *Darvernum*, Bedæ & alijs *Dorobernia*, Anglis *Canterbury*, Latinis *Cantuaria*' (*ibid.* 76), 'Nobiles minores sunt Equites Aurati, Armigeri, & qui vulgo Generosi & *Gentlemen* dicuntur' (*ibid.* 64). The main English cities and rivers

are listed initially in Latin (Continet Anglia urbes plurimas, inter quas maxime excellunt, *Londinum*, *Eboracum*, *Cantuaria*…, *ibid.* 63) and discussed later with their English names, while some other cities appear only in their English forms (e.g. Newcastle, *ibid.* 65). Sometimes translations are not made into the language of the region in question: '*Svecia*, vulgo *Sweden*' (*ibid.* 80), 'vulgo *Switscher-Landt*' (*ibid.* 168) (compare, e.g., *Belsia* vulgo *La Beausse*, *ibid.* 142).

In summary, CS is not homogenous with regard to either its general patterns or its motivations. Firstly, the use of CS in etymological discussions can be seen as either strengthening the arguments or clarifying them. This is similar to the use of Latin quotations in scientific and scholarly writing in general (see Pahta 2004, 2011). Secondly, the use of CS when providing alternative names for particular locations or terms may also have a clarifying function, but at least in some cases the more likely motivation is to provide information which is considered relevant in some way. The translations can also be considered aids in the map reading process since variant names in other languages are not usually provided on the maps themselves (but cf. the previous section). Thirdly, translations can be provided both ways: from Latin to a vernacular or vice versa. Furthermore, the treatment of different languages in this respect is indicative of the assumed linguistic skills of the target audience; for example, it is assumed that Greek words need no translations. Fourth, although CS may be parenthetical, as in the case of the *vulgo* phrases, the other language items may also be embedded in the dominant language grammatical frame.

Conclusions and future prospects

My aim in this article was twofold: first, I have endeavoured to show how a linguistic approach to language choice and CS in the Mercator-Hondius Atlas may prove fruitful. Second, I have addressed some of the particular problems and special features of an atlas with regard to the type of analysis provided here. A map lacks many of the features which are taken for granted in spoken discourse or other types of written texts, but it is important to stress that a map is still a structured whole, and for the most part the concepts developed for studying CS in other types of contexts are applicable here as well. It is also clear that rather than being a simple and homogenous phenomenon, CS and language alternation in the atlas are multi-

faceted with regard to both their forms and functions.

The present article has only touched upon many of the interesting aspects of language alternation and CS in the Mercator-Hondius Atlas. In order to provide a complete picture of these patterns in the future, a more in-depth study is needed. In particular, it will be necessary to chart and tabulate the occurrence of individual forms in several different maps to find out how much variation there is between them. In addition, the relationship between the maps and the descriptive texts merits further research from a CS perspective. A full account of the patterns would of course need to compare each map with its textual counterpart.[13] Finally, there is an important link between the atlas and multimodal text types which are being studied increasingly by scholars working on contemporary written CS. If we compare the map pages to, for example, web pages (see Kytölä 2012, Sebba 2012), it is clear that both can have very complex and hierarchical structures, where each type of information can be distinguished in various ways. The results of this brief survey may, therefore, be of relevance also to researchers studying modern CS. ∎

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