New Perspectives on Digraphia:

A Framework for the Sociolinguistics of Writing Systems

Major Research Paper

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To G. For Sending D.

مكتوب

Nichts gibt so sehr das Gefühl der
Unendlichkeit als wie die Dummheit.

– Ödön von Horváth (1931)

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I. Introduction

> "As the most visible items of a language, scripts and orthographies are 'emotionally loaded', indicating as they do group loyalties and identities. Rather than being mere instruments of a practical nature, they are symbolic systems of great social significance which may, moreover, have profound effect on the social structure of a speech community." (Coulmas 1989: 226)

This quote by Florian Coulmas expresses very accurately why scripts are not merely important practical tools for communication, but so much more. Everything about them can take on symbolic meaning. The shapes and forms of letters can evoke memory of other cultural symbols to which they are similar. Without changing an alphabet, style alone is already meaningful. This becomes immediately clear if one imagined that this MRP could have been written in a *different* **font** ***than*** Times New Roman. Changing the script of a language might not be perceived as a common occurrence, and is unimaginable for some people to think that their language could suddenly be written in Cyrillic or, for example, in Hangul lettering. It is not an easy undertaking for any speech community to change its script, and whenever it does happen (actually quite frequently, if one looks closely into the long history of writing systems) this change itself is very meaningful just as much as the desire not to change at all.

This "meaning of script usage" that I am concerned with here and which is going to be the main topic of this work goes beyond the linguistic and scientific aspects of how a script relates to language. Writing systems affect the community in various ways: they might be the place for dispute and serious political foe, they might be connected to major socio-cultural shifts in a society, they might be linked to other contentious issues like religion, modernization, progress, identity, cultural conflicts, ethnicity, and to a much lesser degree even gender. All of these issues which are already very much part of more traditional sociolinguistic research are also at work in the complex dynamic between scripts, languages and speech communities.

Looking at writing systems from a sociolinguistic perspective is of course not novel at all. Many of the topics mentioned in this introduction have already been discussed in the literature: in most cases, in the context of specific case studies of script adoption or change and, to a lesser

degree, in the discussion surrounding the notion of *digraphia*. However, efforts which try to bridge various phenomena into one all-encompassing framework for a sociolinguistic study of writing have, to date, been rather limited. What this MRP sets out to do is to take a systematic look at what kinds of options there are for literacy. It will be explored how communities make use of scripts and what kinds of meanings these different literacy options can have. In doing so this perspective will show that the analysis of the literacy histories of languages can provide vital insight into historical and societal "innovations and changes" of which any kind of script choice is "merely symptomatic." (Fishman 1977: XIV, see also Glück 1987: 117).

Chapter II. will explore previous work on sociolinguistic aspects of writing systems. Here I will specifically focus on the notion of digraphia which can be broadly described as *the usage of multiple scripts for one and the same language*. Many prominent cases of script change are often considered as examples of digraphia, such as the Chinese Pinyin system or the situation of Hindi/Urdu and Serbian/Croatian. I will show in the literature review that these kinds of "archetypal" digraphic cases have something in common with many other phenomena of literacy which are usually not considered as falling under this notion. After reviewing several theoretical approaches, I will present my own perspective on sociolinguistic inquiry into writing systems (in chapter III.), and this view will make use of previous perspectives on digraphia and, at the same time, expand on it. Furthermore, I will make a distinction between "dominant" and "unique" scripts in chapter IV., a distinction which will be crucial in this new framework presented here. The dominant-unique difference should establish the notion of scripts which are used by more than one language vs. ones which are only used by one language at any given moment in history. Before setting up the actual categories of my framework in chapter VI., I will also present a range of reasons (in chapter V.) which can be to said to be the underlying motives that speech communities have to choose one of the options of chapter VI. In chapter VI. each option of literacy will be briefly illustrated with an example. There are of course some problematic issues which could not be fully resolved in the context of this MRP. Some of the instances which should be kept in mind with regards to the limitations of this work will therefore be discussed in chapter VII.

II. Digraphia in the Literature

Before exploring the literature on the subject of digraphia, it should be briefly noted that in this work – following Unseth (2005: 20, 21) – a general distinction will be made between the terms *script* and *writing system*. Unseth refers to a given particular alphabet (or syllabary, etc.) as a *script* (e.g. the Roman alphabet) and to the type of writing that is employed as a *writing system* (in this case: an alphabet). Furthermore, similar to Unseth, in this paper I will use the term *style* in my work

> "in a generic way to refer to different ways of writing the symbols of what is agreed to be the same script" (Unseth 2005: 21)

Much has been said about the origins of writing, the characteristics of various writing systems and the categorization of scripts into classes like: ideographic, pictographic, logographic, syllabic, segmental, alphabetic, phonographic, etc. These questions, although of great importance will not be of concern in this work. That there are basic differences in writing systems is evident; however, without getting into the details of this discussion, a basic distinction should be made between *logographic* and *phonographic* (following Haarmann 1991: 147). Haarmann defines logographic as writing which has a fixed meaning but not a fixed pronunciation and divides it further into subcategories. He also further subcategorizes phonographic writing into *segmental writing* (the writing of sound segments), *syllabic writing* and *alphabetic writing* ("Buchstabenschrift", literally letter writing). Despite the fact that this kind of distinction is not the most detailed (see, for example, Rogers 2005: 13-15 for a different classification), keeping this basic distinction in mind is I believe satisfactory for the purposes of this paper.

Scripts can be approached to some degree in a similar way as languages. Unseth (2005) demonstrates this in his recent article in which he also mentions that this perspective has been so far neglected to a great extent by the literature (Unseth 2005: 19). He spells out how scripts "become flags" and how they take on additional social and cultural meaning for their users. He argues that the relationship between a language and a community using this language can be regarded as similar to the relationship which exists between a script and its community (Unseth 2005: 20). In spite of not having been discussed extensively, this discussion has sometimes taken place in the

literature under the topic of *digraphia*. In the following the current literature on this concept will be examined in order to lay the foundation for developing a broader, all encompassing framework for the relationships between scripts, languages and their communities.

Originally, the term *digraphia* was coined as a parallel to Ferguson's (1959) concept of *diglossia*, which is used to refer to two varieties of a language which coexist in a speech community at the same time and of which one is used as a high status (H) and one as a low status (L) variety.

According to Grivelet (2001a), Zima (1974) is one of the first scholars to mention the concept of digraphia. Zima makes a distinction between *digraphia* and *diorthographia*, but in his article only goes into detail of the former by discussing the example of Hausa. He makes a strong case for looking closely at digraphia from a synchronic perspective – when two scripts are used at the same time – as opposed to only focusing on the diachronic aspect – this is to say, when a language changes in script over time (Zima 1974: 59). He also emphasizes the importance of using language communities from Africa and Asia for the analysis of the phenomenon (Zima 1974: 60), since he believes that there are a great number of cases which have not been fully studied yet. He defines digraphia as follows:

> "[T]wo types of written form of one language co-exist, based upon the usage of two distinct graphical systems (scripts) by the respective language community." (Zima 1974: 60)

He defines instances of diorthographia as situations where

> "[t]wo types of written form of a particular language co-exist, using the same script, but they are based upon the usage of two distinct orthographies by the same language community." (Zima 1974, p. 58)

Zima's definition of digraphia is very similar to later definitions of the notion. Despite this, his approach is somewhat problematic. In his definition he does not make specific reference to time, but merely states that the two forms of writing "co-exist". Also, he does not define "language community", therefore it is not clear if he is referring to the same language or the same speech community (since "speech community" can be understood as either a linguistic or social notion [see Hymes 1974: 47]; Hymes argues for the latter). Furthermore, Zima also does not give examples for

diorthographia – a concept that has not lived on after his article – which makes it difficult to evaluate his contribution to the discussion of digraphia on a theoretical level.

The often cited and very interesting article on the subject stems from Dale (1980)[1]. Dale defines digraphia as

> "the use of two (or more) writing systems for representing a single language (or varieties thereof)" (Dale 1980: 5)

He distinguishes between *synchronic* and *diachronic* (*historical*) *digraphia*, synchronic digraphia being "more than one writing system used contemporaneously for the same language", and diachronic digraphia being "more than one writing system for a given language in successive periods of time" (Dale 1980: 5). He emphasizes that whenever digraphic examples are analyzed, their social, cultural and political backgrounds which give rise to them have to be closely examined. His main contribution to this field is the distinction between digraphia of the synchronic and diachronic variety. But he also points out that the distinction between the two is not always clear since, often before a language fully changes its script to another one, two scripts can coexist for a short time next to each other (Dale 1980: 6). While this is undeniably true, what is presented in his article as a problematic issue will be resolved in the broadened framework I will propose in chapter VI. (see sections VI.4. and VI.6. on additive and subtractive digraphia).

Working independently from Dale, DeFrancis (1984) published a very similar article about digraphia four years later. He defines digraphia as "the use of two or more different systems of writing the same language" (DeFrancis 1984: 59). Just like Dale (1980), DeFrancis also considers some marginal cases and distinguishes them from more "genuine" cases. He is not as inclusive in his conceptualization of the topic as Dale is. What I will call "diachronic digraphia" (script change over time, see chapter VI.7.) and "structural digraphia" (different scripts employed in one language according to different grammatical structures VI.4.b.) in my framework is only considered "marginal" by DeFrancis (1984: 60). For him, real digraphia consists only of what I will call

[1] In his article Dale (1980) still calls it once *diagraphia*, but it might be a spelling mistake. Also Jaquith (1976) calls it that in his article "Diagraphia in Advertising". There seems to have been some variation about the actual term in the early days of its usage. Jaquith's work is rarely mentioned in later discussions on digraphia, but there is a place for his contribution in my framework (see chapter VI.3.).

"synchronic digraphia" (different scripts employed in one language according to a social factor like, for example, religion, see chapter VI.4.a.).

Another scholar who has written extensively about writing systems is Florian Coulmas. He makes the basic distinction between "writing system reform", "script reform" and "spelling reform" (Coulmas 2003: 234, 235). For him script reform consists usually of two steps: "script choice" and "orthography formation" (Coulmas 1989: 242). While this might be true if one considers first time script adoption (as for example in languages adopting the Roman script) and subsequent choice of orthography rules, this perspective is not easily applicable to all kinds of literacy reform or choice of literacy option in general. Coulmas' distinction into three types of literacy reforms does not suitably account for many of the examples mentioned in this MRP and many other cases reported by the literature, as well as cases which likely still remain unreported. While the basic choice of a script and additional decisions about orthography, as mentioned by Coulmas, definitely have to be part of any framework on the sociolinguistics of writing, these steps alone cannot be sufficient. What is missing in my opinion is a much broader approach to the topic of digraphia, a framework of digraphia which considers all forms of digraphic literacy and sees them as a normal part of the sociolinguistics of writing as opposed to being odd and rare occurrences.

Many years earlier Gelb (1963) already brought up some cases which could be called digraphia. While he acknowledges that a language can have several types of writings over a longer period of time, he also says:

> "[c]ases in which one language is expressed at the same time in different writings are few and unimpressive." (Gelb 1963: 227)

This is a gross misconception, as the reported cases of script change, script death, script shift, script adoption and script addition show. It is not the absence of digraphic occurrences but rather the absence of these terms, the absence of a standardized nomenclature and a stabilized framework which make these conditions appear rare and odd.

Chiang's detailed account of the Women Script (Nüshu) in Hunan province, China (Chiang 1995), also contains a theoretical chapter in which the notion of digraphia is taken up. In his

literature review on the subject Chiang points out that Dale (1980) does not consider internal, structural changes within one script to be instances of digraphia (Chiang 1995: 120). Chiang considers instances like this to fit under the concept of diorthographia as proposed by Zima (1974). He also refers to another study which surfaces rarely in the literature on digraphia, namely Jaquith's (1976) study "Diagraphia in Advertising" (Chiang 1995: 121). In this study, Jaquith looked at the spelling of brands and advertising language which often deviate from the normal spelling. These instances, which are not considered digraphic by Dale (1980), DeFrancis (1984) and Grivelet (2001a), fall under Zima's digraphic concept of different spellings which can exist for words within one language. Chiang makes the case for the inclusion of Jaquith's observations into the notion of digraphia. I consider this one of the most important aspects of Chiang's contribution, since I strongly believe that a very inclusive approach should be taken. Chiang's definition of digraphia is as follows:

> "Digraphia is the representation of one language by more than one variety of scripts resulting form the importation of non-indigenous scripts in the context of political or cultural invasion, or the creation of indigenous scripts where non-indigenous scripts already exist, or the differentiation of an indigenous script into semantic and sound varieties due to language change and the advantage of scripts in identifying cognate words and differentiating homonyms. In the last case, the semantic variety is usually identified with high social status and formal usage, whereas the sound variety is identified with low social status and informal usage." (Chiang 1995: 122)

Chiang understands that a "semantic variety" of a script is a form where a certain spelling is kept although the pronunciation has changed. He cites /nait/ as an example. No longer pronounced /nixt/, Chiang calls the variety used to write <night> the "semantic variety" as opposed to the "sound variety" <nite> which can also be found (Chiang 1995: 112). Furthermore, as he has encountered in his example of the Women Script, the sound variety becomes associated with a low status and informal usage and the semantic variety of script becomes associated with a higher status and formal usage. Chiang suggests in his work that script (as a kind of diglossia) with an emphasis on its semantic function is used by people with higher social status (predominantly men) and that script with an emphasis on its sound function is used by people of lower status (on the other end of the diglossic scale) – this is to say, mainly women.

While this definition of digraphia seems to fit into the context of Chiang's specific work, it is hard to see how this can be applicable on a wider scale. I find there is not a clear enough connection between the previous literature on digraphia and the new meaning Chiang wants to assign to it and also that it is not universal enough to be applied to a broad range of cases. The social factors which he mentions as being involved (political and cultural invasion) seem not to be as inclusive as he wants his approach to be. Furthermore, as will be commented on in the following pages, a connection between digraphia and diglossia can be somewhat problematic.

Another contribution to the discussion of digraphia is made by Grivelet (2001a). His definition is as follows:

> "[D]igraphia is a single sociolinguistic process with two types of outcome (concurrent or sequential digraphia) and with specific features related to the causes and types of development of the various cases" (Grivelet 2001a: 6)

We see that this notion is much more exclusive and resembles the previous approaches of Dale (1980) and DeFrancis (1984). Grivelet summarizes what has happened in the last decades in terms of building a theoretical notion of digraphia. He has identified two trends: digraphia as "the coexistence of two writing systems for the same language" and digraphia as "the change of writing systems for a language" (Grivelet 2001a: 3). He also mentions that a diglossic High-Low distinction is not commonly found in examples of digraphia and that it is therefore not useful to regard digraphia as a mirror image of diglossia (Grivelet 2001a: 4). I agree in this respect in believing that it is not useful to regard a H-L distinction as a default element of the core concept of digraphia. While it might be able to be incorporated into more specific cases at later stages, it should not be regarded as essential to the basic notion.

When Grivelet reports on the types of digraphia that Dale (1980) has identified in his article, he also states

> "The long list of examples contains the typical cases of digraphia [Hindi/Urdu and Serbo-Croatian, my remark] but also some dubious examples, like cases of the creation of new writing systems for previously unwritten languages (Dale 1980: 11), which could hardly qualify as being digraphias." (Grivelet 2001a: 6)

I am not quite sure what Grivelet means specifically with “dubious examples”, but what this quote shows is that the fact that digraphia could be seen as something more than “two scripts for one language” is not easily accepted or at least not something which seems like a logical and natural perspective on the topic. In my opinion, this lack of considering a larger spectrum of literacy constitutes one of the flaws that the theory around the “social dynamics of writing systems” possesses.

The most recent and most similar article to my work is Unseth’s (2005) important contribution about similarities between choosing scripts and choosing languages. Unseth mentions three different ways that the term digraphia can be understood (Unseth 2005: 36):

- digraphia as two scripts being used for one language
- digraphia as script changes for one language over a certain period of time
- digraphia as the multiplicity of scripts being used for different languages which are all present in one speech community (e.g. Arabic for Urdu, Roman for English and Cyrillic for Russian, all in Toronto)

It is the latter which I have not encountered anywhere else in the literature and which will also not be included in my MRP.

Unseth (2005) also tries to make a connection between digraphia and Ferguson`s (1959) diglossia. He regards as H-L differences cases of a language being written with different scripts in different domains. As examples he cites Chinese Pinyin, the romanized version of Chinese which is used for special purposes; using the Roman alphabet for email communication for languages which are normally not written in Roman; the “monumental writing” in ancient times (for example in Egyptian Hieroglyphs); or the English system for shorthand (Unseth 2005: 36). Also DeFrancis (1984: 64) made this connection between diglossia and digraphia, when he points to Pinyin being the L variety of Chinese character writing. I am hesitant to classify certain scripts either as high or as low, especially when there is a certain specific domain attached to them, as is the case with using a script for email communication or other technological tasks. While it is of course true that scripts

can differ according to the domains they are used in, I am hesitant to call every form of domain differentiation *diglossic* or vice versa.

Yet another approach to digraphia is taken by Cheung (1992: 210) when she discusses digraphia as a notion in the Chinese context. She distinguishes between digraphic situations where

- the high and the low forms derive from the same script system
- both derive from the same system but the low form borrows foreign elements
- the high and low forms derive from different script systems.

Unfortunately, Cheung is not very clear in her choice of examples. It never becomes clear from her article what specifically is meant by "high form" and "low form"; if it either refers to script, to spoken language or to language in general. With her first category Cheung refers to the fact that despite traditional and simplified Chinese characters both come from the same writing system, they are employed in different social functions, since Taiwan does not accept simplified characters, but Hong Kong has shifted towards them recently. She also reports that some places on the Mainland seem to have periodically employed the traditional characters for specific social functions (e.g. as attraction for visitors from Hong Kong) (Cheung 1992: 211). While I can see that Cheung wants to refer to the different social meanings that scripts or versions of scripts can acquire in their usage, I cannot see how she makes the connection with a H-L distinction.

For the second case, Cheung discusses the fact that Chinese dialects – apart from Putonghua – are not linked to standardized Chinese writing. They use the characters in a non-standardized way, make up their own characters, borrow Roman symbols or are not written at all. This situation seems to be endorsed by the government in order to preserve Chinese unity. Cheung mentions some examples from Hong Kong where English words are included into the standard and vernacular variety of Chinese; these words are spelled in the Roman alphabet. Taking on English words can also be seen as belonging either to a lower socioeconomic class or to a subculture (Cheung 1992: 212-214). This would definitely fit as an instance of a H-L distinction, but in this way Cheung is contradicting herself if she says that standard varieties also borrow foreign elements. The situation gets further complicated by the fact that Cheung is not clear about describing the H-L relationship

between the languages or varieties she considers. Also, if Cantonese and Mandarin are to be taken as separate languages, or dialects, these are issues which would definitely need to be considered when discussing their relation to literacy. Cheung considers Putonghua to be the standard and Cantonese to be a dialect; however, I am sure the analysis would take a different turn if one would consider them as two different languages, one of which has official status.

Cheung sees possible digraphia with a H-L difference should there ever be an extended use of Pinyin as some people desire. In this case, if characters are only used by the elite and Pinyin is employed by the masses, this would lead to a clear diglossic case of digraphia (Cheung 1992: 214, 215). While this example might fit into her digraphic framework as an instance of the third category, the problem is that this kind of digraphia does not currently exist and for the moment it remains speculative. As I will describe in chapter VI.4.c. Pinyin is used in certain domains only and there is no reason to consider a framework for digraphia with examples which have little basis in reality. What Cheung's article shows is that trying to propose a model for digraphia out of a description of one particular language situation (especially the Chinese one) can easily fail; in Cheung's study she equates digraphia in too narrow a fashion with the concept of diglossia. What is needed here is a broad concept of the digraphic notion which is able to encompass many cases and to describe them in a systematic manner. Cheung (1992) and Chiang (1995) might provide insights into specific cases but their work is not suitable for establishing the groundwork for a more general approach.

Of course there is also some other work on writing in general which touches on the subjects of concern here, without specifically referring to it as "digraphia". An example of this would be one of Fishman's articles (1988). In this article he distinguishes between three different categories of occurrence (Fishman 1988: 273):

- the first script which is chosen for a language (FWS)
- a previously established writing system that is replaced by another one (EWS)
- partial modifications of a current writing system (CWS).

He mentions a number of issues related to each of these categories. For FWS he brings up tensions which can arise in a speech community between intra-group and outside forces, when the script choice of an outside group is considered to be the "better" option for literacy. This can often happen when a language does not yet possess writing and is tempted or forced to take the script of the most prominent outside force with which contact is strongest. While this undoubtedly has practical advantages and strengthens in- and out-group relationships, this can also produce in-group tensions since this decision to model its literacy after something external can be seen as a threat to the cultural integrity of the group (Fishman 1988: 274, 275). While Fishman makes some good and true observations about FWS, he does not provide many examples or discuss specific cases. This leaves the impression that he is referring mainly to literacy adoption as it occurred in modern times (with a Euro-centric focus). Also, while he has identified the most basic underlying motives for any choice on literacy, there is more which needs to be considered other than just "wanting to be culturally authentic" or "wanting to belong to a group". Proof that my observations of Fishman's narrow perspective are to some degree justified can be seen when looking at his EWS category where Fishman emphasizes especially Romanization and focuses mainly on the modern era of script change (Fishman 1988: 276-278).

With regards to Fishman's CWS category, it should be mentioned that he considers mere script modification to have the least ideological implications and argues that desired structural simplification in the orthography is the main driving force in script modification (Fishman 1988: 280). While I agree with the latter statement, I am not sure if one can say that either script adoption or modification is more ideologically charged. This will most likely depend on the example, since language attitudes and attitudes towards literacy play an important role in this respect.

While Fishman's article is undoubtedly a good contribution to the subject which raises many important issues, the disadvantages are that it is quite Euro/Roman-centred and therefore has a somewhat skewed perspective on the matter. In my opinion it is better to cast the net wider on this issue in order to also be able to account for cases of digraphia from different eras and regions.

Returning once again to Coulmas' contribution mentioned above, I want to take another close look at his tripartite distinction (Coulmas 2003: 234-241):

- writing reform: a change occurs with regards to the script as well as the writing system, e.g. from Roman to Chinese
- script reform: no change in writing system, but change in script occurs, e.g. Roman to Cyrillic
- spelling reform: change within a given script

I am not sure to what degree it is useful and necessary to divide categories into "writing system changing" and "writing system keeping" reforms. These kinds of things are easy to identify on a theoretical level but I am not sure as to whether system change is perceived as that big an issue on a practical level by the people who are actually involved in script changes (and if not the change in the symbols themselves is already concern enough for them). But I believe that the distinction which Coulmas presents here makes at least one thing obvious, namely that there is a difference between *script-external* and *script-internal* changes. His first two cases could be considered script-external cases, since another, external script is becoming associated with the literacy tradition of a language. The third case could be considered script-internal digraphia, since the literacy tradition transforms itself here from the inside, without any other scripts affecting it. Also Hansell (2002) is concerned with some of the issues mentioned by Coulmas. He approaches them from a different perspective: he looks at cases where a script is adopted into another language, but during the adoption process changes its writing system type (as in the Chinese Kanji which developed into two different syllabaries in Japanese). While these observations may be interesting on a theoretical level, I don't think that the writing system a script belongs to should be the starting point for a discussion about history and literacy.

A reference was made in an article by Houston, Baines and Cooper (2003) to differences in writing according to the social or regional characteristics of the writer. Parallel to the notion of dialect, they call these scriptal differences *grapholects*. While at first glance there seem to be similarities between grapholects and dialects, since certain script varieties can equally be minor or

major like dialect differences, there are flaws in this view. A language can be written with different scripts and these can differ along social or regional varieties, however they do not need to be related. This means that grapholects would be not related to each other, if, for example, different social groupings would employ completely different scripts. In this instance one should rather speak of a situation of bilingualism in a society than of dialectal differences. This is something Houston, Baines & Cooper clearly did not have in mind with the term grapholect. Instead of calling the phenomenon "digraphia", they refer to "the concurrent use of two or three scripts" (Houston, Baines & Cooper 2003: 432) as "biliteracy" and "triliteracy", without going further into detail on the subject. The authors also use the term "dominant script", which they define as a script that has "superordinate prestige and benefits from social, religious, or political factors that comprehensively favour its use". When there is a change, an "abandoned script" is given up for a "target script". Since this information is only mentioned in a footnote, they do not go further into the topic (Houston, Baines & Cooper 2003: 432).

After considering much of the previous work which has been done on the subject of digraphia, I want to argue for an inclusive and broad perspective on the topic. In order to do this, I find it useful to include not only a synthesis of those opinions expressed by the scholars surveyed, but also to consider actual cases of digraphia. I argue that what is needed for digraphia to become an established and more useful concept is a reconceptualization of the notion. By broadening the concept and by dividing it up into several distinguishable parts (a task which will be accomplished in the remaining sections of this MRP) a case should be made for the fact that there is more to digraphia than just the "one additional script". This kind of digraphia, as it has been described in the literature together with its underlying motivations for its emergence, such as politics or religion, is then taken as one instance only and only as one possible example of many more ways in which language and script can be, and are, related to each other. I define digraphia as the general state of an association of between *one or more scripts* or *orality* on the one side with *one language* on the other side due to at least one underlying motivation which can either be deliberate or not. This association between language and scripts appears in the histories of languages in many different

forms; this is why there is not *one* form of digraphia as has often been suggested by some of the theoretical discussions on this topic. In order to explore all possible kinds of digraphia, a few more words are necessary to give additional theoretical grounding to this new approach.

III. Expanding the Concept of Digraphia

Before moving on to the specifics of furthering the theoretical discussion, I want to take another close look at Unseth's (2005) work, specifically at his remarks about the script-language relationship being indirect:

> "There can be multiple scripts used for a single language because there is no one-to-one correspondence between a language and a script, their relationship being an indirect one." (Unseth 2005: 20)

He mentions in this context that a script can be replaced more easily than a language and that while not every society has a script, one language can have multiple scripts. I find there needs to be more clarity with regards to the relationship between these three entities, namely: *scripts*, *languages* and *communities*. Prominent topics usually discussed in language contact, bilingual speech communities, language shift, language death, language convergence and similar situations are all examples of some sort of interaction between these three entities, but unfortunately most of the time they are full of highly complex interrelations. It is this aspect of Unseth's, and similar, work which needs to be approached in a highly systematic fashion.

We can see in Fig. 1 that a community – in this case Japan – makes use of a particular language – in this case Japanese. Furthermore, Japanese employs a script – in this case, more than one[2]. This seems to be a rather straightforward example, partially because Japan is a quite homogeneous society, because Japanese is not spoken anywhere apart from Japan and because Hiragana and Katakana are not used for any other languages outside Japan. But even in this seemingly simple example, which gives the impression of a neat script-language-community relationship, one can easily see the complexity of the situation as soon as one starts to dig a little deeper.

[2] Kanji is used for Japanese content words, Hiragana for particles, other function words and grammatical endings and Katakana is used primarily for non-Chinese loan words.

In each example one needs to look for the defining factor which is responsible for assigning any given number of people the status of a "community". Such defining factors can be everything from *nationality, religion, geographical location, political orientation, socioeconomic class, caste, ethnicity, gender* or a *common history*. The specifics in each case will only become visible if one looks deep into the history and current socio-political situation of a particular group. In order to take a sociolinguistic view on script use and change, a close and systematic look at the script-language-community connections of each particular case is necessary. Unfortunately the extensive work which is required to explain choices on literacy for any given language could not be provided for each example presented in this MRP.

Due to space and time restrictions, no one language situation could be assessed in greater detail than what the secondary sources on writing in general have already provided. This is due to the reason that it is not the goal of this MRP to present new insights into any particular language but rather to present a new categorization of literacy choices, where specific cases are only touched on briefly for the purposes of exemplifying.

What is it that makes the Japanese example not so neat as it initially seemed? The answer lies in asking further questions: What makes Japan a community? Is it the fact that it is a sovereign nation? Or the fact that its inhabitants possess Japanese citizenship? Or that the majority of the population is, ethnically, of the same origin? This raises further questions about the indigenous populations which are living in places like Hokkaido and Okinawa. The fact that there are other ethnicities present and other languages spoken on the territory called "Japan" complicates the situation. Also, one of these languages, Ainu, makes use of one of the Japanese scripts, namely Katakana. We can now reconsider our first model and incorporate the additional information into a new figure (Fig. 2).

Interestingly, Coulmas has also made use of a similar model (see Fig. 3) to show how scripts can be the driving force for the disassociation of two dialects, ultimately leading to two different literary standards. Dialect 3 (D3) on Fig. 3 is written with both scripts, S1 and S2, whereas the other dialects are only written with one, ultimately leading to language divergence.

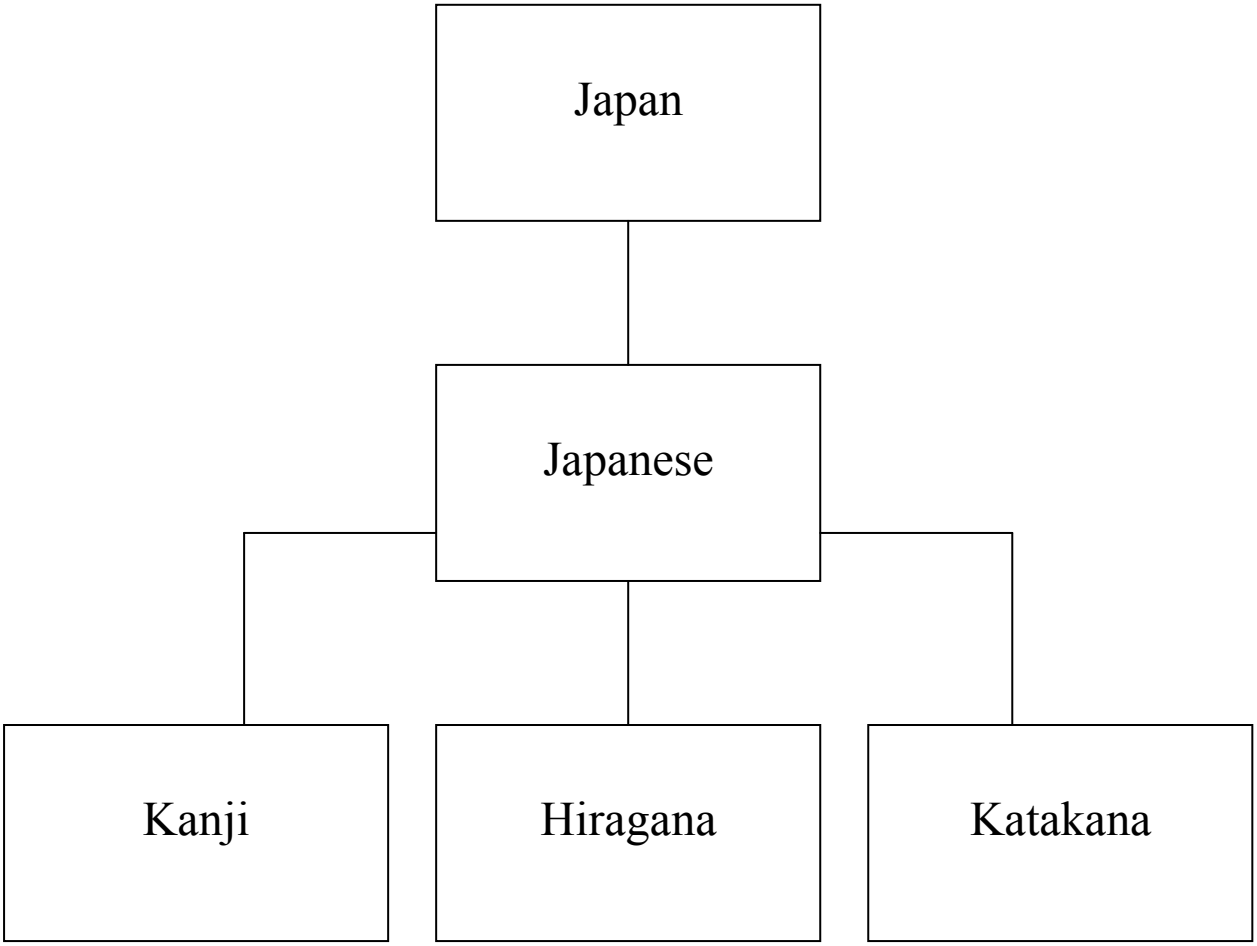


Fig. 1 - Specific example of a community-language-script relation: Japan

This is an example of how scripts can be deliberately or unconsciously at work in expressing social conditions, namely the drifting apart of two segments of a society. It is particularly this link, between language and society, that Coulmas has not included in his model. The reasons and driving forces for this divergence are to be found in the third layer (the societal one), since dual script use is symptomatic of the underlying reasons for a language split. It is this particular connection, that between a script and the society using it, which makes digraphia such an important and exciting topic for sociolinguistic analysis. While the artificial example of Japan as well as Coulmas' model seem to be indicators of an easy task, the reality looks different. What becomes difficult here is that one language can be used by only one community or by many. Similarly, one community can also use one language only or many. This already very complex situation gets further complicated if one adds script as an additional layer.

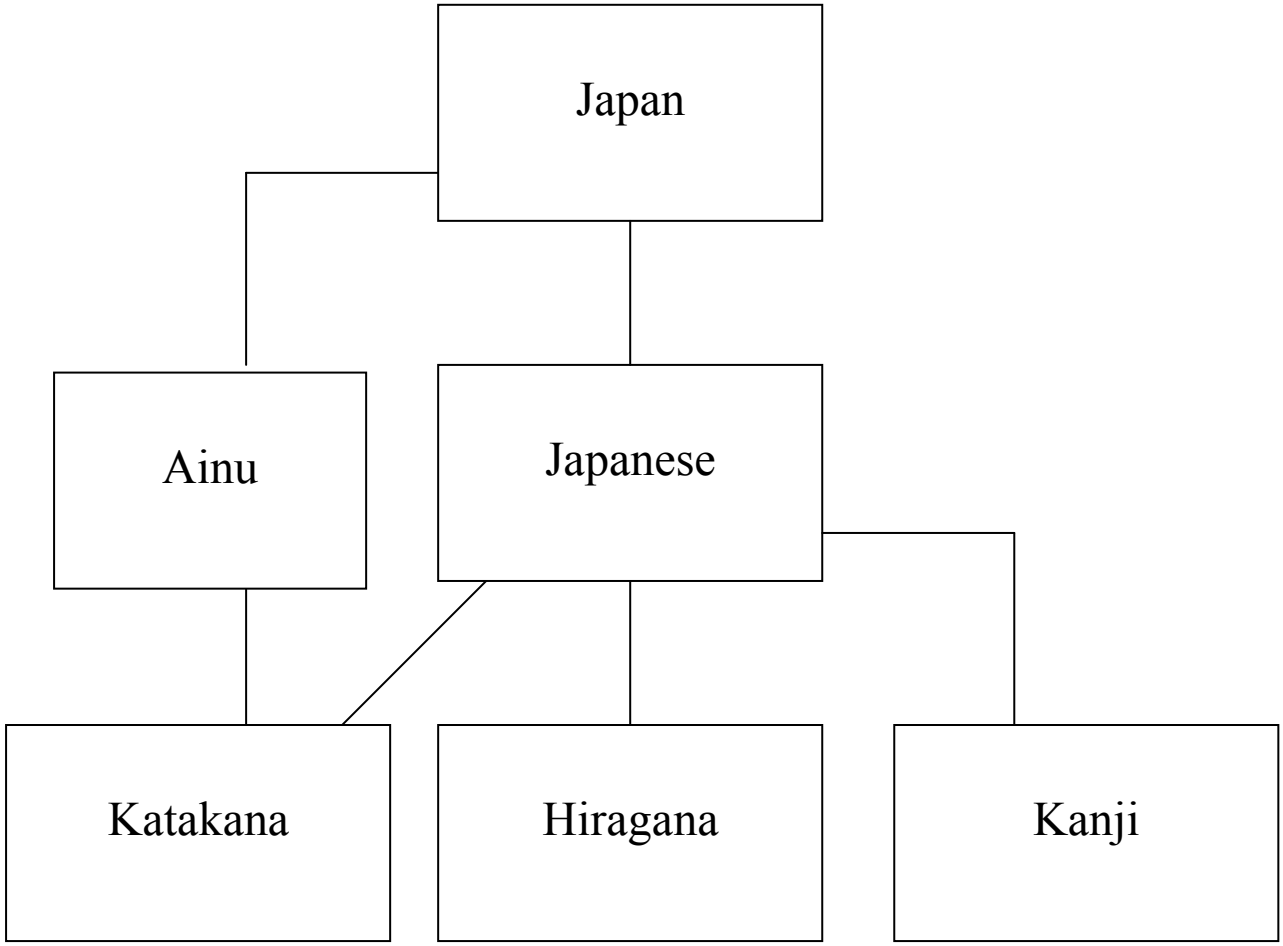


Fig. 2 - The community-language-script relationship becomes more complex

A script can be used by one language or by many languages. Furthermore, any given language can also employ a multiplicity of scripts at any given moment. Fig. 4 displays the three entities which have to be explored in detailed analysis. These three entities are basically comprised of two fundamental connections: the script-language connection and the language-community connection.

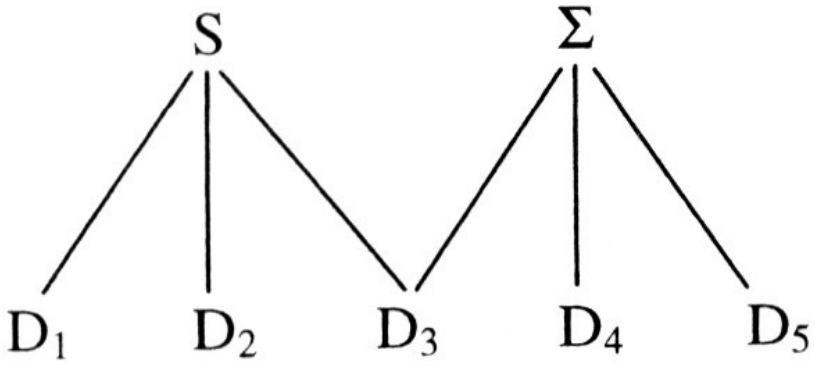


Fig. 3 - Coulmas (2003): Language divergence and script usage

The latter will not be specifically addressed in this MRP; literature on bilingual language communities and language contact fulfils this task. The former, the script-language relationship in its various forms will be closely examined in chapter VI. It should be noted, however, that script choices are always seen here with regard to their languages, not in regard to the people using them. The script-community relationship, despite being of primary importance, is a secondary relationship which can only be discussed after the script-language relationship has been established. The way scripts are linked ultimately – via languages – to communities themselves is influenced by motivations for choosing one step over another one; these motivations are spelled out in chapter V. The way a script is linked to a community, and the social motivations underlying these choices, have to be closely analyzed when one is presenting examples of language-script relationships. While these observations are not significantly different from Unseth's (2005) comments, I strongly believe that a more systematic approach to this complex matter can be helpful.

Which language is chosen by a community, what defining factors unite a group of people as a community, which script choices are made with regard to a language used by this community, which motives underlie these decisions, which socio-political or cultural reasons this behaviour depends on – all these are intertwined questions which need to be disentangled in order to shed light on the workings of the speech community with regard to literacy.

> "As a matter of fact, symbolic interpretations of digraphia, however petty, are hard to avoid because writing systems, scripts and orthographies are not perceived by their users as value-neutral instruments." (Coulmas 2003: 234)

This quote expresses the focus one should take in exploring these questions. One should try to make obvious *what meaning* scripts take on when they are used, chosen, abandoned, taken up, replaced, maintained, etc. by language users. This is precisely the reason why digraphia presents itself as an ideal starting point for a general discussion on script meaning. Digraphia is a term that refers to situations in which certain dynamics are at play, namely the dynamics which make for example a shift from one script to another one possible at a given point in the history of a speech community.

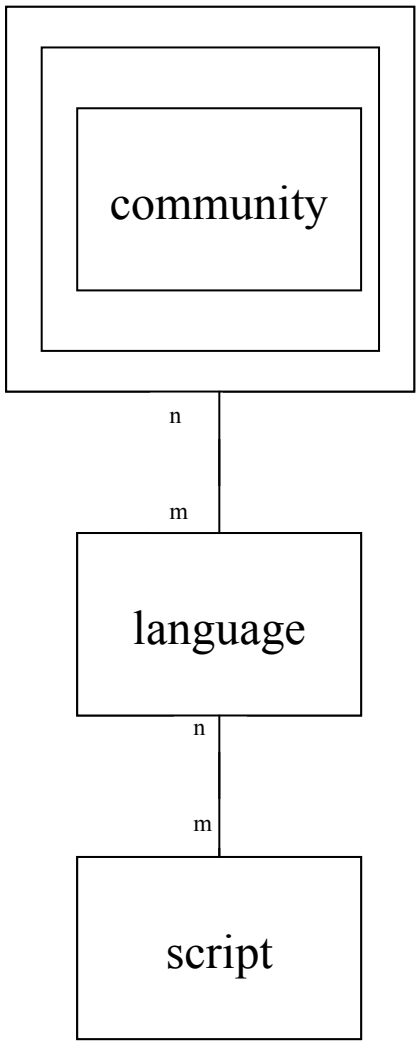


Fig. 4 - A complex interrelationship: communities[3], languages and scripts

What I am arguing for in this paper is a view which sees these and other dynamics as *always being at work*, be it in situations which have already been identified in the literature as "special" and "interesting" (i.e. typical digraphic situations as mentioned by the authors surveyed in chapter II.), be it in any other given situation. It will be the task of this paper to identify the range of possible conditions which this "dynamic" underlying the script-language relationship can lead to. By identifying almost all, if not all, possible conditions and also presenting a set of motives driving this dynamic force, script change for example becomes not something which is looked at as something outside of traditional occurrences, but as just one possible option out of many which are being

[3] The multiple rectangles around communities seek to express that more than one aspect can be a deciding factor in constituting a community. For example, the Ainu are to be found in a *country*, live in a very specific *province* (Hokkaido), are of a specific *ethnic origin*, etc.

governed by *the same dynamic force* (although possibly influenced by different motives). A whole range of possible script-language relationship categories are placed in a framework together with these few "odd" occurrences which have already been identified in the literature, and it is hoped that the framework proposed will be a suitable one for all of them.

In this way digraphia becomes something which is basically always at work, sometimes as an energy which creates shift from one state to another and at other times as something which is responsible for maintaining one state for a long period of time. What is ultimately driving this energy are the various social factors which provide the reasoning and the force to lead from one condition to another. As diverse as the history of writing is, the various motives for each decision can be subsumed under seven different possibilities under which the concrete reasons will predominantly fall. In the following pages the reasons for any change in condition will be first spelled out. Subsequently each possible state or condition will be explored and presented with examples. In doing so, each example will only be considered in terms of its underlying social factor as much as it has been possible to identify this from the literature used. As already mentioned, it was not possible to conduct extensive research on each of these examples, since the focus of this MRP was mainly a theoretical one.

The selection of examples presented for each possible condition in chapter VI. should make it evident that similar decisions made with regard to writing can serve completely different functions and can have completely different goals. That, for example, two different languages change their script to another one does not necessarily mean the same in those two instances. Creating a new script does not automatically mean wanting to create a new and unique identity for oneself, but it can have different kinds of meanings depending on the actual situation. The meaning of literacy choices is to be searched for through looking at the history, the social conditions and the language attitudes of a certain speech community. Only by connecting certain social factors with the linguistic facts and the actual literacy choice taken can one gain insight into the processes at work in each case. How tricky the relationship between writing and the social world is, however, can be seen in this quote from Zhou:

> "Rather than having an inherent relationship with religious and cultural beliefs, writing in a particular writing system may symbolize the link between individuals and their community through the traditional institutions that employ it. The strength of the symbolism, strengthening an ethnic community's social integration, may depend first on the strength of the traditional institutions in the community and then on the closeness of the relationship between those traditional institutions and the writing systems employed." (Zhou 2003: 344)

He rejects a direct relationship between culture and religion with writing, but rather argues for a view that sees the meaning of writing established out of the actual use in that community. This means that if one is serious in describing any given case, meaning should not be regarded as something pre-existing but rather as something which results out of the actions and social processes which have been at work in a particular community and in this way have given meaning to certain practices, to writing as well as to other social practices.

Without claiming to have the status of a theory or a model, this paper merely seeks to lay out these connections by looking at writing and the meaning of it in a more systematic way than it has been previously done. While it is undoubtedly true that actual analysis requires detail and accuracy, this does not mean that there are no general categories which can be established. This MRP presents a set of prototypical categories in terms of literacy decisions as well as their potential underlying motives.

As Fishman (1977) already mentions, a big factor in terms of writing and choosing how to write is associated with *the desire to be similar*. This can either mean being similar to a specific group or also being in line with its own cultural tradition from which one does not want to stray. As Fishman mentions, also the opposite – *being dissimilar*, wanting to be different – is something which can play a role in this matter, but this process has not been given enough room in the literature yet (Fishman 1977: XII, XIII). Coulmas (1989) also touches on this matter. He mentions the fundamental wish of script users to be similar to someone else (for example to the speech community in one's immediate surroundings) when devising their script, orthography as well as writing system. Coulmas points out that this desire to be similar guides the decision making process and precludes a number of scripts from being chosen since they do not fit the similarity criteria

(Coulmas 1989: 227, 233). Furthermore, he also mentions, similar to Fishman, that this similarity is not always desired, since too much similarity may become dangerous for the cultural integrity of a community (Coulmas 1989: 236). Losing its own identity and wanting to belong to a desired group or ideology: it is precisely these two poles between which speech communities need to operate, and often keeping the balance between these two factors is a difficult task.

IV. Dominant vs. Unique Scripts

A central distinction made in the framework presented in this paper is the one between a *dominant* and a *unique script*. I argue that one can speak of the relative *dominance* of a script. I call a dominant script one that is being used by more than one language. Prime examples are doubtless the Roman, the Cyrillic, the Chinese or the Arabic scripts. Of all of these it is the Roman script which has the strongest dominance. The dominance has increased during the past centuries in which the Roman alphabet has been adopted by a variety of indigenous languages in South America, Africa and Asia through the vehicle of colonialism and imperialism. What has increased the dominance of this script has not only been the fact that it is used by a great number of languages, but also the fact that the languages using it are often not genetically related to each other. Cyrillic, which has a weaker dominance in the world of writing systems, is used by several languages, but quite a few of them have some genetic relationship to Russian. Therefore it can be said that the dominance of the Cyrillic script is not as high as that of the Roman one. A script becomes (weakly) dominant as soon it is used by two or more languages; dominance increases with the number of languages using it and with the absence of genetic relationships between them.

A unique script on the other hand is a script which comes about through invention and is therefore only used by one language. Once it is used by an additional language it loses its uniqueness and becomes – very weakly – dominant[4]. Unique scripts are logically much more easily affected by script death, since there is always the danger that the language using that script dies out.

[4] N.B. that the distinction between strong and weak dominance is not made in this paper. It might however be useful to consider this distinction for any further developments of this framework.

This can happen if for example the speakers of this language die out or decide to or are forced to switch to another language. Furthermore, script death can also occur if speakers decide at some point to replace the unique script of their language with another one. Should this happen, a unique script will die out as it is not used any more. Script death occurs if a language which used to be written in a particular script ceases to use this script or if this language ceases to exist altogether. Since this particular script was only used by that one language alone, script death occurs. Script death not only affects scripts which have been unique for the entirety of their existence but they can of course also affect dominant scripts which have decreased in dominance over time and have eventually reached the status of a unique script[5].

While language death is not as easily reversible, script death does not imply that the script will disappear forever. The nature of writing makes it such that scripts can much more easily be revived than languages. Theoretically it would be possible to choose any dead script in order to write any language. Therefore script death can not be regarded as final and as irreversible as language death. Leading towards script death are things like loss of domains in which the script is used, for example when a script remains in use for liturgical purposes only before it dies.

The distinction set up here between dominant and unique script is useful because it is not only the change from any one script to another that can be regarded as meaningful. There is a difference as to whether one chooses to invent a set of characters for a language or if one chooses to adopt a set already used by another speech community. While normally both of these options are available theoretically, invention is not the default action when deciding on a script for a language. Furthermore, not only can there be observed differences between the adoption of a dominant script and invention, but there can also be differences between the adoption of a very dominant one and a unique or weakly dominant one. Which kind of script type will be chosen cannot be considered to be arbitrary.

[5] This fact implies that unique scripts do not necessarily need to come about by invention, but that a script can also become unique after previously being dominant.

It should be noted, that while "dominant" refers to a script "used by two or more languages" and "unique" to one "used by only one language", there exist many cases of low dominance. If a script, for example, is only used by three languages, for example, perhaps even three closely related ones, it is clear that the label "dominant script" is a rather artificial term. In this case, when the script is only used in a highly contained geographical area, in a Sprachbund or perhaps by a language family, one can not really speak of great dominance. Nevertheless, what is interesting in this ficticious example is the fact that the second and third language adopting that script did *not* make the choice to invent a new one or adopt an even more dominant one. This particular choice being made, namely to adopt a *weakly dominant* one, a script of maybe regional dominance rather than a script which opens up the doors to the wider world, is an interesting aspect for analysis. Observations like this might allow one to gain insight as to how certain speech communities deal with social, economic and cultural development and into some of the language attitudes present towards their own as well as to other languages.

V. The Motives

The following seven motives are regarded as the potential underlying reasons for each decision about literacy. These "decisions", as will be presented in chapter VI., can be everything from changing a community's script, maintaining a script, losing a script, creating a script, etc. I argue that whenever there is a change in condition (e.g. a switch from script maintenance to script loss), one of these seven reasons will be at work. No change can be considered arbitrary. If one looks at what other decision could have been made and compares it with what was actually done, the motivations responsible for these changes will become visible.

Once again it needs to be stressed that, while the outcome might be the same, the motives themselves can vary in different speech communities; similarly, while the motives can be the same, the actual outcomes do not need to be. What becomes clear if one takes a close look at the literacy options and the motives for their employment, is that the usage of scripts seems to have a meaning. Scripts seem to play important roles for societies in dealing with issues like modernization,

progress, occupation of territory by foreign entities, war, nation building, keeping one's culture and tradition, engaging in international affairs, etc.

Some of the distinctions made in the list of the seven motives seem to be quite similar to each other. One can easily find cases where more than one of the motives are present. Nevertheless, I still look at them as separate motives, since cases can also be found where only one or the other aspect is present or most salient (e.g. *disassociation* might often involve *creating a unique identity*, but at times this could also be coupled with *associating with another group* or, also, coupled with nothing else because the most salient and prevalent aspect would only be disassociating oneself without having the other issues [fully] present).

Similar motives already have been presented by Unseth (2005: 22, quoting Fasold 1984): He distinguishes between identification with another group, distancing from a group, linguistic reasons and broad scale developments (such as the desire to take part in currents like technology). Also Coulmas (1989: 237, 238) comments on the reasons for script change: he identifies social pressure, prestige, resistance or acceptance of political developments, the presence of a dominant language and culture, the level of technological development, and local customs as factors which influence decisions about literacy. To this list I might add specific language attitudes and religious or spiritual beliefs. Coulmas (1989: 238) also stresses that linguistic reasons alone are not sufficient to account for all the changes which are going on in terms of script changes, etc. As Coulmas insists, while linguistic reasons cannot be reason alone to opt *for* one particular literacy option, they can be very powerful if the linguistic system does not fit the script. He argues that linguistic reasons can very likely be a driving force and the cause *for failure* of a particular option. Nevertheless, Coulmas does not go into detail and fails to provide specific examples to support his claim.

In my opinion there is the possibility of fine tuning Unseth's (2005) distinctions, without wanting to place cases rigidly in one or another category like Coulmas' (1989) distinction might suggest. In some cases it might also be useful to speak of two different motives being present at the same time. What the following list mainly emphasizes, however, is the fact that all of these conditions *may* be present alone in any given case.

V. 1. Purely Linguistic Reasons

If there is reason to adapt the writing of a language in order to accommodate language change, one could say that social factors are not at play at this point. While it is seldom the case that any change in writing happens *only* due to social factors, changes brought about for merely structural reasons – cases where motive V.1. is the *only reason* for a change – are not thought to be significant and will therefore not be considered in this paper. In my opinion it is questionable if writing, and the decisions made about it, can *ever* be said to occur completely independently of their social environment. Motives V.2. to V.7. are primarily social ones, but that does not mean that linguistic considerations are non-existent in these instances. Certain linguistic reasons which would make, for example, a script change or modification structurally necessary are thought to be *secondary* to the six social reasons listed below. If change or innovation comes about in a speech community, *both linguistic reasons and social motives* will therefore be at play; i.e. the motives presented below V.2. to V.7. should be understood *as including any given linguistic reason* which might be applicable to any given case. This linguistic side of the change in literacy conditions depends on what kinds of changes are necessary for a language, whether the spelling needs to be fixed, some phonemes are missing or whether logographic characters are ill-suited to a particular language. All these detailed problems as well as their solutions will arise out of the actual situations. I argue that most (if not all) cases have a linguistic and a social aspect to them, and that the way one goes about "fixing the social problem" will be influenced by one of the remaining motives V.2. to V.7. as well as linguistic considerations. Therefore, in discussing the various motives below, it is understood that in each case particular linguistic issues will be at work to a greater or lesser degree. Another point is raised by Unseth (2005: 28) as well as by Berry (1977: 4) who mentions that even if a writing system is not suitable for a language, this unsuitability can be overridden by social consideration which still leads to the adoption or maintenance of the script in question. In view would in a way be countering Coulmas' (1989: 238) claim mentioned above.

V. 2. Modernization

The way a group behaves in making choices about writing can and is often closely linked to desires to modernize its society, including its language. This can mean wanting to modernize the language in terms of lexicon or literary standard, especially in cases where one language is influenced by a more powerful one on various levels. In this case modernizing the writing can become part of a greater modernizing effort with regards to language as a whole. Another language which is perceived to encompass a certain modern ideal becomes the "target" for language planning and literacy issues.

This modernizing effort can also be part of an even bigger undertaking, namely to cause change in one's society and to bring about modernization in a whole variety of areas (such as education, laws, trade, etc.). This can be the case if there is a consensus that one's society belongs or should belong to the cultural realm of a specific political, cultural or religious power (such as the USSR, Islam, etc.). If a script is associated with the opposite of modern life because a community does or does not belong to a certain political/cultural/religious sphere, the steps to be taken to rid oneself from this image can also often include decisions about literacy. People then in these cases tend to choose scripts which are used or thought to be used by more "modern" societies. Often alphabets become associated with modernity. For a long time it could be found in the literature that alphabets are the superior and more "natural" way to write. However, motive V.2. is by far not limited to cases of languages adopting the (Roman) alphabet. Any writing system or script can potentially take on the meaning of the ultimate desired modern script.

V. 3. Preservation of the Status Quo

As will be clear from for example option VI.3. a lot of examples presented revolve around staying in the same position. This is especially valid if a society considers itself to have a certain amount of power and status and therefore does not wish to change anything about itself. Apart from cases like this which can have to do with a certain satisfaction resulting from a particular situation, absence of a wish to change can also mean something else, namely establishing one's society as unique in refraining from doing what the majority of the community all around are doing at this

moment. This means that not every action which involves "no change" on a practical level needs to be connected to this motive, preservation of status quo, but a no change literacy policy can also be caused by different motives. Choices taken with the goal in mind to preserve the status quo are especially interesting, although they are seldomly taken up by the literature in an explicit way. Cases like this reveal just as much about the social make-up, cultural norms and traditions as instances with an explicit desire for change. This of course can be observed in various aspects of society and culture, but writing proves to be an especially exciting instance where societal and historical patterns manifest themselves.

V. 4. Westernization

If this motive is present in a society, the effect it has on choices being made about writing is essentially the same as in motive number V.5. – wanting to associate oneself with a certain group. The association with the so-called "West" is nothing else than certain communities wanting to imitate, affiliate themselves, model their societies after or establish closer connections with another society which for some reasons appeals to them. The West, or what is perceived as Western, is such a society, a group of nations which has become appealing to a variety of groups over the centuries. Since deliberately wanting to be close to or like the West, or forcing certain Western concepts and structures onto communities is a very common occurrence not only in the history of writing but in history itself, it can be considered separately from the very neutral motive of wanting to associate with any group. The reason to separate this category from number V.5. lies exclusively in the amount of cases where languages take on the Roman alphabet for precisely that reason: becoming part of an international community which is to some extent dominated by the West, being able to learn and communicate in English more easily and establish relations not only with the West but with a variety of other nations which have the same in mind. What should be spelled out here once again is that this desire to be similar does not necessarily need to come from a community itself, but can also be forced onto communities once they are taken over by occupiers or colonizers. While in some cases the distinction between deliberate and non-deliberate assimilation may be easy to make, in many cases it is not. The outcome, namely the assimilation of two groups – in this case the so-

called West and another one – can be rather similar, however. While Westernization will not be specifically discussed in this MRP due to space restrictions, the establishment of this motive should be considered useful if one looks at the numerous cases of especially Roman script adoption.

V. 5. Association with a Certain Group or Ideology

As we have already seen in motive V.4., the association with another group can be a strong force guiding all kinds of social decisions, not only the ones about how to write one's language. Apart from the frequent phenomenon of wanting to be like the West we can also find all kinds of other similar cases. There are various factors which are decisive in terms of whom groups want to align themselves with. These factors can be among the following: one or more than one nation state, a religion, an ideology, a geographical location, an ethnicity, a caste, a culture, a common history/past/traditions, etc. All of these things about communities can become so appealing that other speech communities decide to write their language in the same way that this particular group does. This motive is one of the most commonly appearing ones in the history of writing. A distinction can also be made between speech communities making their own choices in order to assimilate or enforce bonds and cases where communities are forced to make these moves (see also Unseth 2005: 23).

V. 6. Disassociation from a Certain Group or Ideology

In the same manner as association, disassociation is also an option. Of these mentioned factors (nation, religion, ideology, geographical location, ethnicity, caste, culture, common history, etc.) one or more can suddenly or over time become causes for a group to establish the wish to change their writing to another one (see also Unseth 2005: 24). Two groups can mutually disassociate from each other (who had once been considered as "one whole" in the past) or one group may want to diverge from a particular other group. A difference can be made here in terms of the strength of the disassociation movement which can be only present in one of them or in both.

Disassociation does not necessarily need to imply the motive *association which a new group*. Without wanting to be like another community, the desire to be different alone can be reason enough to induce changes with regards to writing (and of course other social aspects as well). What

should be mentioned with regards to disassociation, but as well association, is that these processes are of course a matter of degree. This becomes especially visible if one chooses to invent a script. There is a lot of room to make a script very close or very different from another one in terms of aesthetics, forms, shapes and cultural symbols (see also Unseth 2005: 26, 33). Examples for different scripts for which their similarities in terms of style to other scripts are clearly visible are the Brāhmī-derived scripts (see appendix script no. 1). Brāhmī was an Indian script used from the 4th century BC to about the 1st century AD (Salomon 1996: 376; Haarmann 1991: 521-525), which has produced a great number of script derivations. One of them was the Nagari script, which was used for Sanskrit and was later called Devanagari. Distancing is not only linked to forms, however, as Unseth (2005: 26) already pointed out. There are three levels in which a script can differ from another one:

a) forms and symbols used
b) direction of writing: possibilities include from left to right, from right to left, boustrophedon, rotated by 90 degrees or a combination thereof
c) type of writing system used: distinctions like logographic or phonographic writing systems (including specific subcategories) are to be taken into account in the evaluation of the specific choices that speech communities make.

As already mentioned before, some scripts seem to be especially appealing due to some of their characteristics such as the amount of time that is needed to acquire writing skills. This leads writing systems, such as the alphabet, to gain more prestige over others. Gelb (1963) even assumed that writing always moves in its development from pictographic writing via syllabic writing to the final stage of an alphabet. History shows that this notion is problematic. Others like Hannas (2003) find that Chinese characters impede a society in expressing its creativity. The alphabet is often said to lend itself to more abstract thinking and often the advancements of the Greeks are partially accounted for with their "invention" of the first fully phonetic alphabet. Without entering this debate, I would like to say regarding this matter that often, very advanced cultures develop the

ability to make very advanced creations, but script is in this case likely more the outcome than the cause.

V. 7. Creating a Strong and / or Unique Identity / Unity

Some choices and options about writing are especially suitable if one has this goal in mind: breaking away from one's surroundings and presenting oneself as a separate and powerful entity. Many situations can be found where the creation of a strong and unique identity and/or the emphasis on cultural or political unity has been the desire for a community, and there are more options than just inventing a new script to make this happen. This case is quite a common one in the history of writing and this goal, just like all the other motives, is strongly connected with what else is happening in the particular society in terms of ideologies and beliefs at that very moment.

In assuming the previous seven motives, I hope that whatever any given speech community decides about writing, whatever choices are made or are not made, could be made but aren't or are normally not made but are – that all of the motives presented here are sufficient to account for the choices spelled out in the next chapter.

Before moving on, I still want to mention Dale's (1980) compelling view on this matter. While I do not take this up further, since I have divided up my motives in a different way, his view is nevertheless unique. It seems to speak for a strong connection between actual *options of literacy* and the *motives* present in a society, and in terms of this matter his perspective is similar to mine. He writes:

> "Two primary factors have been identified as operating on a society in the choice of script for representing its language. These are the prevailing cultural influence (often a religion) and the prevailing political influence of the period in which the choice is made. Synchronic digraphia results when more than one such influence is operating and none can dominate all groups of speakers of the language in question. […] Diachronic digraphia results when different influences prevail over a given speech community at different times." (Dale 1980: 12)

We can clearly see how Dale makes the connection between influences and outcomes. What I find very important to note as well is that *not* religion and politics *per se* are assumed as influencing factors in my framework, but that the motives presented (V.2. to V.7.) should act as variables which

can either be tied to religion, politics, culture or other areas, depending on the actual case. In this way the motives are designed to be more universally applicable.

VI. The Options of Literacy

After reviewing the literature and setting up the various motives involved in making decisions about literacy, it is now time to present the many different ways in which writing can be related to language. This part of my work takes as a foundational concept the expanded notion of digraphia as an underlying force which is always at work in regards to writing. To what kind of outcomes this force can lead is what will be of concern here. In setting up specific categories I tried to include all possible ways in which script and the literacy tradition of a language can be affected by any kind of socio-political evolution. Examples will be provided for each category; however, their particulars are kept to a minimum since each of these examples would require a much greater amount of detail and attention than this MRP can provide. What should become clear through the establishment of these categories are the following two points:

- What happens in terms of script choices of a language is not arbitrary but meaningful. Writing can, just like language itself, be used to index group membership and to express various aspects of one's own identity. While the symbols of a script are of course interchangeable and do not have meaning per se, the fact that they are used by certain groups lets the actual symbols acquire meaning. In a way it might even be applicable to speak – similar to "language in use" – of *scripts in use*, of a pragmatics of writing. Written texts and their symbols acquire meaning additional to the meaning they express with language itself, namely the symbolic meaning a script acquires when it is used by certain groups, for certain purposes, etc.
- While the number of scripts as well as the number of languages is seemingly endless, the number of possible relations between them is not. There is a limited amount of ways in which language and script can be related to one another. Theoretically, this means that

the following list should be capturing all major possibilities[6]. By describing all of these categories and providing examples, the categories should be established as useful ones in the sociolinguistic research of writing.

VI. 1. Staying in Orality, being without a Literacy Tradition

Unsurprisingly, most of the languages ever spoken in the history of mankind and the majority of the languages existing today are and were never written down (Coulmas 2003: 225; Coulmas 1989: 225). The exact number of languages is of course unknown, since it is impossible to establish objective criteria of what exactly counts as a language or as a dialect. The 14th edition of the Ethnologue lists 6,912 languages with 347 languages spoken by 94% of the world's population (Gordon 2005: 16). This means that the rest of the languages (about 6500 languages) are spoken by only 6% of the world's population. These are naturally small or very small speech communities ranging from 1 speaker to 100,000 speakers (Gordon 2005: 16). Clearly, there are reasons why some of these languages are not written down; these reasons can be, for example, the costs being too high for a small community to establish literacy or its ethnolinguistic vitality (Giles, Bourhis & Taylor 1977) being already too low in order for people to start writing. These communities which exist without writing are groups of not more than a few hundred or 1000 speakers which can still be found among other regions in the rainforests of Brazil, in Venezuela, Colombia, in the Sahel, in the jungle of Malaysia, in the mountain valleys of Papua New Guinea as well as in the outback of Australia (Haarmann 2004: 11). What should also be considered, however, apart from these more "natural" occurrences of orality, is when there would be a chance to write but it is not taken. If the keeping of orality is somewhat of a deliberate decision, then this should receive further scrutiny, also in a model whose primary concern is writing. In a world where literacy is maybe not the norm from a quantitative perspective, but nevertheless firmly anchored in what is so often called the "civilized world", the choice not to write one's language down is definitely something which

[6] There are of course more categories than those listed in this MRP and there are still some opportunities for the fine tuning of this framework. However, the categories mentioned here can be considered the "major" ones. Examples for further categories could include considering categories VI.4. and VI.6. in terms of the dominant vs. unique distinction or adding subcategories to number VI.7. which give special consideration to change occurring after additive digraphia. For the time being it seems useful to me, however, to stick to the more salient categories.

deserves further exploration. With this I am only referring, however, to speech communities which have purposefully opted for a life without literacy. I am not referring to communities which for whatever reason (as mentioned above) have never made the step from orality to literacy.

As in all the other occasions of cultural development, what is at stake in cases like this too is the admiration for prestige languages and their scripts on the one hand, and the perceived threat of an influencing culture on the other hand. This is especially valid for communities which have a strong desire to stick to themselves and not give up any of their local customs and traditions. While the choice to write can be seen as a true instance of the desire to anchor a language in a society and to prevent language shift and other cultural losses, the opposite might also be true. The choice not to write can precisely serve the same function, namely to hinder the language and culture of a small community from dying out. The goal of communities in these cases is the preservation of the status quo, sometimes also coupled with the creation and support of unity/a strong unique identity.

One does not find references to cases where writing is rejected on these grounds very often; much more frequent are cases where writing is adopted in order to make a community stronger. One example I came across is the case of Pirahã (Dixon 1997: 82). The Pirahã people live along the Maici river in Brazil together as a tribe but not in total isolation; nevertheless they still managed to keep their language alive. Dixon (1997: 82, quoting personal communication with Daniel and Keren Everett) reports that the Pirahã people retain an "inward-looking attitude" and do not want to take on a "civilized lifestyle". They are said to be opposed to having their language written down, an attitude which seems to have helped them retain their language.

Another example which might be considered as falling into this category is the one of the Celtic druids, who were opposed to writing in order to keep their in-group knowledge secret. Lehmann (1989) writes about them:

> "The druids were jealous of their important functions as the source of divine law and ritual and, as Julius Caesar informs us, were prohibited by religion from committing their teachings to writing. Only a few pupils were chosen for the rigorous training to carry on the pagan rites that were kept a mystery to the uninitiated. […] Druids and poets (*filid*) were prophets and […] kept alive an oral

> tradition of history, myth, and story, as well as the genealogies and great deeds of the leaders and their ancestors." (Lehmann 1989: 159, 160)

Orality can just as much as writing be seen as the key to keeping one's own traditions, be it specific knowledge as in the case of the druids or the resistance to foreign influences as in the Pirahã example. Maffi (2000, 2001) touches on some of the issues involved in cultures which keep up a rich oral tradition. She discusses the different attitude traditional societies have towards knowledge and mentions that remaining exclusively oral helps them keep their in-group knowledge and this particular relationship to it. According to Maffi (2000, 2001) they do not focus on individual creators of knowledge or of cultural production, but regard creation and ownership as something which belongs to the whole group. Individual ownership is not in the same way part of their value system as it is in the "Western" sense. Maffi (2001: 415) stresses that indigenous cultures often focus on a "continuous collective creative tradition" and regard their heritage as inalienable and as something to be passed down from generation to generation. Maffi also touches on the subject of language (Maffi 2001: 420), as language is also considered part of indigenous knowledge and culture. She points out that, given these characteristics of indigenous life and culture, such societies put a strong emphasis on the dynamic, unfixed and intangible spoken word which leads them not to write and that these differences are difficult to understand from significantly differing "literate" perspectives (Maffi 2001: 425; 2000: 182). If their languages would be written down, however, their knowledge and heritage could become more vulnerable to abuse and also be influenced by outsiders (Maffi 2001: 423). This is why the choice of orality can ultimately help keep a speech community alive (Maffi 2000: 179).

This can also become an important issue with regard to indigenous heritage rights, a subject Maffi is primarily concerned with and which she encourages people to take more serious:

> "Among the rights to be accorded protection for indigenous peoples, therefore, positive recognition should be given to the *right to orality* – the right for indigenous peoples to maintain, transmit, develop their heritage, or parts of it, orally if they so wish, without any form of compilation or other fixation, and still have it protected." (Maffi 2001: 424; emphasis in original)

Also Haarmann (2004) reports a case of a community which exists without writing and despite this fact is not threatened in its existence. He cites the example of the Etoro in the Bosavi region of Papua New Guinea, a community which counts 900 people. Although they have very limited contact with literate cultures, they have never adopted writing themselves and seem to be not in need of it. Haarmann does not give further details as to what the specific reasons are for this condition (Haarmann 2004: 11).

Cases like this show that not only writing but also "not writing" can take on meaning and that this has to be included in a sociolinguistic framework on writing. Preserving one's language orally can therefore have its place together with other choices which are made as to how to transmit and preserve information, culture and heritage. As Cook-Gumperz & Gumperz (1981: 91) point out, the introduction of writing into a society can have major impacts on the way knowledge is stored and transmitted. This can also affect not only literacy itself but also a variety of other issues such as discourse conventions or cognitive strategies (Cook-Gumperz & Gumperz 1981: 93).

What this brief insight into orality should show is that there are different reasons as to why not all communities have writing: some because they might not have the means to make their societies literate, because they do not regard it as important, because they have different approaches to knowledge, because they want to shield their community and make it less accessible to the outside world and some because they want to protect a specific or not so specific area of knowledge for themselves (see also Gaur 2000: 8, 9). Whatever the reasons may be and without making any generalizations, it is evident that the study of orality can enrich a sociolinguistic inquiry of writing just as much as the study of literacy.

VI. 2. Script Adoption: Adopting a Script for the First Time Out of Orality

For first time script adoption, not only which script is chosen and why needs to be considered, but some focus should be diverted to the exact circumstances which make people choose to abandon illiteracy. No generalizations should be made here; as already mentioned previously, taking on writing does not *need* to equal the want to modernize a society or to associate with the

West. The specific reasons for taking steps out of illiteracy are undoubtedly going to influence how the issue is dealt with on a practical level.

Adopting a script for the first time is of course a very common thing to happen in the history of writing. One can say that any community at any given point in history has three options to choose from to make literacy happen: inventing a new script, adopting a more or less dominant one or choosing one used only by one other language. In the latter case this script will of course lose its unique status and become (if only slightly) dominant. A fourth option, which I will consider separate at this point, is the option to adopt a variation of a dominant script[7]. This fourth case is unsurprisingly the most commonly occurring one, since it is rarely the case that a script designed for one language fits neatly onto another one.

Clearly, and this is why this category needs to be separated from category VI.7. (script change), taking on a script for the first time is not the same as changing from one script to another one. Establishing literacy for the first time might at times even be easier, as Unseth points out, if there is no or only little written material already yet produced in a certain script (Unseth 2005: 35). Once too much has been produced in one script it might be very difficult to get an entire speech community to change. Furthermore, the following generations will inevitably be cut off from that older tradition, unless they specifically learn to read the former script. Due to these considerations different dynamics are at play in script adoption than in script change, although there might still be some overlapping aspects to these two categories.

Coulmas (1989: 233) mentions with regard to first time literacy that sometimes it can be very useful to develop writing for previously unwritten languages since it can give people the opportunity to become literate in their native language first, before acquiring the second, more dominant and often more prestigious language of their surroundings. Therefore it is often useful to choose the same kind of script which is also used by the more dominant language of wider communication. As Coulmas (1989: 233) states, what plays a role in making a language literate is

[7] Of course modification can also be involved in the case of first time script adoption of a unique script, but this category is not taken up further in this MRP due to space restrictions.

the question of which language and which group one wants to be close to and identify with. Despite this observation, which is undoubtedly applicable to a variety of cases, this does not mean that modelling itself after another group is necessarily all that is at work in first time script adoption. All kinds of motives can be involved and even if the same script is adopted – which is also used by the more dominant language in the area – this does not automatically mean that the reason for this move was a desire to assimilate to this community.

a. Choosing a Unique Script

If a language which has never been written down before chooses to use a set of symbols only used by one other language in the world, there have to be very good and specific reasons for doing this. This case is less common than cases VI.2.b. and VI.2.c. If one already makes the effort to adopt a script, among other things the usefulness of this new writing needs to be guaranteed. Usefulness of writing is, especially in modern times, connected with being able to share information as quickly as possible with as many people as possible. Therefore, a unique writing might not seem apt for these purposes. Communities which take on a unique script, however, seem to have different priorities. For them, being connected to the very group using that unique script seems to be more important than being connected to the world in general. In this case, acquiring a unique script could be regarded as a strong instance of wanting to associate with a particular group, culture or ideology. It is clear that all of the dominant scripts currently in existence were once adopted from one language to another for the first time; however, precisely how this happened is rarely discussed. It was not easy to find cases fitting into this category. Cases of first time script adoption of a unique script – scripts which then of course become dominant – are quite rare and if they are mentioned at all, not many details are given.

One such case is the language Mingrelian (Holisky 1996: 367). The language has adopted the Georgian script (see appendix script no. 2) which is usually used for Georgian. However, it should be noted that the language currently still lacks a literary standard. Writing in Mingrelian only began in the second half of the 19th century and was subsequently only used sporadically (Mingrelian research project online source). Georgian and Mingrelian are spoken in basically the same area,

namely in Georgia, and they are also genetically related, both belonging to the Kartvelian languages (Holisky 1996: 367). The Georgian alphabet, called Mxedruli, is one of the few unique alphabets in the world. It has been used since the 13th century AD (Haarmann 2004: 101, 102).

Another instance of unique script adoption was the case of the Uyghur script (see appendix script no. 3), which was taken on by the Mongols at the beginning of the Mongol empire (Kara 1996: 545). It was borrowed as a whole set and was used without being modified for centuries, and it was also written vertically like the Uyghur script. Unfortunately, not many specifics are mentioned in Kara's article about this case of script adoption.

What is undeniable, however, in this kind of first time script adoption is that there must exist a certain bond between the giver and the receiver of literacy, figuratively speaking. This picture should not at all imply, however, that in each of these cases there is a certain group actively "giving" literacy to another group, or even that a community is giving another one "permission to use its script". All this picture of a giver and a receiver of literacy is set out to convey is merely that there needs to exist a certain link between the two (or more groups). This connection can be a desired and/or a very visible one or not. Furthermore, a community might have a certain admiration as well as reason to follow the footsteps of another group, without the giver ever knowing about it or being in any way involved in it. This connection does not necessarily need to be based on or imply assimilation to a dominant and powerful community (or even assimilation per se, for that matter). It is striking that in certain cases for certain groups, unique scripts are the better or more desirable option rather then employing a dominant script (whatever script is meant by "dominant" at any given point in history). Regardless as to whether a dominant or unique script was chosen, there needs to be a connection between the giver and receiver of literacy, and it is important to note that this relationship may be based on assimilation and dissimilation desires as well as other motives.

b. Choosing a Dominant Script

Choosing a dominant script is by far the more common option. But it is not only the symbols and the group using them which are of crucial importance here, but it is also the type of writing system that can be relevant. Gelb (1963: 239) at the time still considered alphabets to be better

suited to "serve the aim of human intercommunication" than syllabaries or logographic systems. The days where alphabets are regarded as inherently superior are most likely over, but for some they still have the air of something more advanced (Gaur 2000: 3).

> "[A]ll writing systems are on an equal footing as far as their ability to convey any and all thought is concerned." (DeFrancis 1989: 268, 269)

There are no inherently superior or inferior types of writing system. But when it comes to choosing one for one's own language, this choice can also turn into something political. This is of course problematic since there are many types of writing systems and it is not easy to separate them into neatly divided categories. Also, not each system fits each language in the same way. Therefore, despite linguistic factors being involved, why certain languages have certain scripts and certain writing systems can be regarded as having mainly culture-historical reasons, rather than linguistic ones (Haarmann 2004: 46).

> "While it is true that in general a language chooses only one writing as its means of expression, there are no limitations as to the use of one writing for any number of languages. The cultural predominance of a certain country frequently results in the borrowing of its writing by its culturally less developed neighbours." (Gelb 1963: 228)

This is not exactly how the situation would be expressed in modern words, but the phenomenon is the same in the 1960s as it is now: speech communities borrow writing for a variety of reasons, and they often adopt a script of a country or a speech community to which they have or desire to have a close relationship. What is Latin now was Cuneiform (see appendix script no. 4) thousands of years ago. Being very influential in its time, it was adopted from the Sumerians by the Akkadians, the Babylonians, the Assyrians, the Elamites, the Hurrians, the Eblaites, the Urartians and the Hittites (Gelb 1963: 228; Dale 1980: 7). It was invented by the Sumerians around 3200 BC, and despite being used initially for more documentary purposes (trade, accounting, taxes, etc.) it later gained more domains, including literature (Green 1989: 43).

Cyrillic's (see appendix script no. 5) initial spread has been closely tied to a religion, namely the Russian Orthodox branch of Christianity, which made the script a popular choice in Eastern Europe (for example for Ukrainian, Bulgarian, Macedonian, etc.). Later, its spread happened

through the Soviet Union, which used it for a great number of languages spoken on its territory. But the USSR did not always follow this policy. Dale remarks in this respect:

> "The representation of languages of the USSR in writing has reflected changes in government policy. Just after the revolution, when the emphasis was on decentralization and the granting of relative autonomy to the subject peoples of Asia, the writing of previously unwritten languages was carried on mostly in the Roman script, perhaps because it was felt to be more international than Cyrillic. With the resurgence of Russian nationalism in the late 1920s and 1930s, however, most of these languages were changed over to the national script, Cyrillic." (Dale 1980: 11)

The Arabic script is the most frequently used one after Roman script (Kaye 1996: 743). Arabic spread especially via the dissemination of Islam, an undertaking which of course would not have been possible without writing (Bellamy 1989: 92). People not only adopted Islam and the Arabic script but often also the Arabic language in which they became literate. Bellamy (1989) remarks that this movement, the spread of the Arabic script, is like the spread of Roman still going on today. He also mentions that while countries like Malaysia, Indonesia and Turkey have recently switched to Roman, some countries like Iran, Afghanistan or Pakistan will probably never change. This might sound very unspectacular to a modern reader, but also such "straightforward" cases which seem never to be changing can be very interesting, since it is these cases where the strong connections between script and society show the most and which can be explored in particularly interesting ways. The Arabic script has been adopted by many languages over the centuries (Unseth 2005: 35; Dale 1980: 8). Since it is the script in which the Koran was written, it is considered highly prestigious and therefore the preferred script for countries with a Muslim population. It spread over North Africa and the Middle East in medieval times, then into Africa (Swahili, Malagasy, Hausa), Asia (Turkish, Farsi, Pushto, Urdu, see appendix script no. 6) and even Europe (Bosnian, Polish, White Russian, Spanish) (Dale 1980: 9).

Sometimes these dominant scripts also get adapted to languages which do not fit easily. An extreme case of this is Sindhi which uses Arabic script. The language differs heavily from the Arabic language, which led to the adoption of the Arabic letters for sounds it was not designed for. For Sindhi (see appendix script no. 6) these letters are now used to write among others six retroflex

sounds, six aspirates, four implosives and two nasals. Some other letters of the alphabet are redundant, so that two or more Arabic phonemes are reduced to one sound only (Campbell 1997: 3). The kind of honour and worship Muslims have for their script is also expressed in Arabic calligraphy (Kaye 1996: 744).

Latin has been linked to Christianity in earlier times and is now, after a secularization of the West, not primarily linked to religion but the West itself, technology, communication and modern life in general. It has been the first script for dozens of languages all over the world and is also the most widely used script in the world. Already in Gelb's times this showed "the present hegemony of Western civilization" (Gelb 1963: 240), a trend which is still going on. The Latin script spread over the Appenine peninsula very quickly in the first few centuries BC. It replaced the writing of the Etruscan, the Umbrians, the Samnites, the Picentes, and the Messapians. Wallace (1989) finds it remarkable that this was achieved in such a short amount of time, especially since it does not always occur that if a land is occupied that the occupiers are also able to instil their own writing on their newly gained land. Latin spread with the colonizers as Romans settled in their conquered lands. Unfortunately however, Wallace also mentions that there is not much exact evidence for how these languages adapted the Latin alphabet (Wallace 1989: 132, 133). This is a trend which happens now as part of a global movement of Westernization and in the orientation towards various forms of technology. What kinds of patterns can be found among communities adopting the Roman script in modern times? What role does the script really play in modernization and/or westernization? What happens to societies which choose a unique script or one low in dominance? All these questions are highly complex and need to be explored with attention to detail and the socio-cultural as well as socio-political background. In this regard it is suitable to quote a sentence by Coulmas (1989: 227), who calls Western orthography "either a prestige model to imitate or a standard to be avoided and deviated from". It is interesting to explore how various cultures and communities deal with this challenge.

To a lesser degree also the Hebrew alphabet has been the desired script for some languages (Unseth 2005: 35; Gelb 1963: 227). This has happened where Jewish communities all over the

world have over time developed their own languages (e.g. Yiddish, Ladino, Judeo-Tat, Judeo-Arabic, etc.) and have written them with the Hebrew alphabet, which is also an expression of their Jewish identity.

As Fishman writes, writing in a certain dominant script is not only a symptom of social change, but has also long term implications for the culture, especially on the literacy of a society:

> "Latinization, Cyrillization and Sinoization are not merely far-going indications of desired (and frequently subsidized or directed) social change and cognitive-emotional reorganization, but they have immediate consequences for the relevance of traditional elitist skills and implications for the distribution of new skills and statuses related to literacy and to the philosophy or ideology which is the carrier of literacy." (Fishman 1977: XV)

c. Choosing a Dominant Script with some Modifications

With regards to the cases of dominant script adoption just mentioned, it is clear that most of these cases would actually fall under category VI.2.c. It is very seldom that script adoption does not entail modification to some degree. Specific types of modification will be further discussed in category VI.5.; all of the modifications listed there will also be valid for this category and all the other categories which refer to the adoption of a script with some modification. Script modification is a tool to bridge gaps between one's language and the newly adopted script. Sometimes loanwords and foreign language material might be present in a language which is not suitable for a script, which is therefore in need of some kind of reform to accommodate the language's native and foreign elements in an adequate manner.

Coulmas (1989: 227) reports an interesting case of non-modification, which shows the politics in script adoption. He mentions the speech community of the Aymara in Bolivia, who have adopted the Roman script. In Aymara the sounds [u] and [o] as well as the sounds [i] and [e] are allophonic to each other. This means that one would only need to represent one of them in writing, for example /u/, which would then represent [u] as well as [o]. Despite this linguistic possibility, in Aymara all four allophones are represented in writing with /i/, /e/, /u/ and /o/. Since Spanish is the prestige language, the reasoning behind this non-modification was to make Aymara appear as similar to Spanish as possible. Having fewer symbols than the Spanish language would have made Aymara

look defective. Fishman (1977: XII) remarks that this is not an uncommon practice among South American indigenous languages.

Examples of modification are frequent, and the specifics as well as the reasons for it of course depend on each particular case. Instances of it can be found for most languages which have undergone first time script adoption. I will not go further into this topic because numerous cases can easily be found. Modification is necessary to fix a lot of different things, be it the addition of symbols to display sounds unique to this language or giving already existing symbols a different phonetic value. The Hurrian language, for example, spoken in the Hurrian kingdom of Mitanni from the 3rd millennium BC in Northern Syria and Iraq, took on its cuneiform writing (see appendix script no. 7) from Old Akkadian. Among other modifications the sign for *wa, we, wi, wu* was also used to display a voiced/voiceless labial continuant pair present in Hurrian (Gragg 1996: 61-63). The Lycian language, for example, uses as its alphabet a Doric variant of the archaic Greek alphabet (see appendix no. 8) (Swiggers & Jennings 1996: 282). In order to display the sounds *q, ã, ẽ* and *ñ*, new symbols had to be added. Cases like this are innumerable.

d. Inventing a New Script

Although by far not as common as script adoption with modification, inventions do occur and have their special place in the history of writing. However, as DeFrancis (1989: 243) correctly remarks, most of the time it is not (alphabetic) *writing itself* that is invented but rather a new set of symbols. Here *creation* would probably be a more suitable term than *invention*. It is this difference between the invention of writing per se and the creation of numerous symbolic systems which Hansell (2002: 160) does not make. He considers writing to be a very rare invention and says that almost all scripts in existence – apart from the Mesoamerican systems – can be traced to either a Middle Eastern or a Chinese ancestor. Hansell says that whenever writing was created outside of these two strains of tradition, people were already familiar with the technique of writing. This makes the invention of writing itself a rare occurrence, but not the creation of new symbolic systems. It is this point that Hansell does not distinguish enough. While it is true that many Indian scripts ultimately can be linked back to the Aramaic one (Haarmann 1991: 521), this does not mean

that there has been no "invention" of new types of script, since all the derivations from the Brāhmī script can hardly be called mere "modifications" of Aramaic (see appendix script no. 1 and 9).

Often script invention can become associated with some kind of creation myth or religious traditions. Many scripts have their own stories and legends attached to them which make them appear as though they were created by a divinity or as if writing was a gift of God. This has been the case with for example Sumerian or Egyptian writing (Senner 1989: 10, 11). Also some African script systems are mentioned to have creation myths, as reported by Kotei (1977). The script used by the Vai in Liberia (Kotei 1977: 58) is said to have appeared to its creator in a dream. Also, Njoya, the Sultan of the Bamoun tribe, is said to have his script for Bamoum from a dream (Kotei 1977: 62). Another interesting example is the one of the A-Hmao people in China. Among them there even exists a legend about their Pollard script (see appendix script no. 10) which was created by a Methodist missionary in the beginning of the 20th century. The A-Hmao consider it as an old native script of their people which they lost in ancient times when it fell into the water. After floating all the way from China to Britain, Pollard is considered to be the one who found the script and brought it back to them (Enwall 2001: 106).

A script is not always invented by members of one's own speech community; often missionaries or other outsiders fulfil this task with varying intentions. Prominent examples of successful creations by foreigners include Samuel Pollard's script for the Miao language, James Evan's Cree syllabary and St. Stephan of Perm's Komi script.

An often cited case of script invention is Sequoyah's creation of a script for Cherokee (see appendix script no. 11), a syllabary which still carries its creator's name (Jensen 1970: 241; Unseth 2005: 25). Unseth sees in this creation an example of the wish to distance oneself from the surroundings. In my opinion it is also just as much an instance of wanting to establish the Cherokee speech community as a strong and vital social entity. DeFrancis (1989: 234) describes how Sequoyah decided to create a syllabary only after struggling with a logographic system. He realized that the task of inventing characters for each separate idea was a very long and difficult undertaking. Initially comprised of 200 syllabic symbols, the Sequoyah script was then finally

reduced to 85 symbols. Sequoyah was invented in 1821 and shows resemblances to the Greek, Cyrillic and Roman systems (Scancarelli 1996: 587) as well as the Arabic numerals. It has been used since 1828 in legal, political, religious and informational publications of Cherokee. Although it is currently predominantly read rather than actually written, it still plays a vital role in the traditional Cherokee church and in Cherokee medicine (Scancarelli 1996: 591).

Another example of North American indigenous literacy is the case of Cree. Its script, the Cree syllabary (also called "Syllabics") was created in 1840 by the missionary James Evans at the mission station Norway House in Manitoba (Bennett & Berry 1991: 90-92). According to Bennett and Berry it was adopted very enthusiastically by the Cree people despite not being a native creation of their own. Soon it was also used for Ojibwe and later on as well for Inuktitut (see appendix script no. 12), only 16 years after the initial creation of Syllabics. However, not all Inuktitut communities use the script (Nichols 1996: 608). Berry and Bennett remark that it is possible that the syllabary might lose ground to Roman, since although the script suits its languages very well linguistically, it of course depends more on political than on linguistic issues if it is kept on or not (Bennett & Berry 1991: 90-92). Murdoch (1985: 519) mentions that there were projects to displace it since the 1960s (see also Harper 1993: 22). The script has not been replaced yet, however, and the symbols can now even be used on computers. According to Harper (1993: 22) the script is perceived especially by non-natives as both, on the one hand as a chance for Native unification and on the other hand as a cause for native isolation. Without pointing to the exact reasons, Murdoch (1985: 520) remarks that there must be some appealing aspects to this script, since it would have been replaced already if this wouldn't be the case. They may lie either in the linguistic qualities of it, in the mere idea of having a script different than Roman, the idea of having a weakly dominant script or in having a script that is closely connected to the Native culture. While this might not look appealing to an industrialized society, making a choice like this seems to fit the needs of these societies and their own values for literacy perfectly (Murdoch 1985: 521; Harper 1993: 23). McCarthy (1995) describes how the Cree communities adopting this script became literate in a matter of only a few years, how Syllabics is well suited for their language and how the

way literacy is acquired and used in these communities is on many levels very different from the way Roman literacy works. Harper (1993: 23) as well as Nichols (1996: 599) mention that people like Syllabics because it makes them feel unique and that they feel a strong attachment to the signs.

Another unique example of a script invention is the Abur alphabet (see appendix script no. 13) created by Bishop Stephan of Perm (Ferguson 1968: 253). He was a Russian Orthodox bishop in the 14th century AD who was born in the area of the Komi people near the Ural mountains in Russia. When he was trying to convert the Komi to Christianity he was met with strong resistance since they were opposed to the Russian population who were socially and politically dominant in their region. Stephan of Perm decided to use the Komi's own language, namely Komi-Zyrian, a Uralic language, for his missionary work. In order to help them gain access to fundamental religious texts, he created an alphabet for their language, which made his missionary work very successful. Even after his death, when his literary and linguistic activity was not carried on by the Komi themselves, the script survived into the 17th century, when it was eventually replaced by the Glagolitic script (see appendix script no. 14) (Ferguson 1968: 254). The Abur script looks only slightly like Cyrillic and Greek, since Stephan was careful in the script creation to ensure that it was as native looking as possible so that people would accept it as their own. Therefore, he used property markings and decoration symbols which the Komi called Tamga signs and which were already in use in their community (Ferguson 1968: 259; Haarmann 2004: 118, 119).

There are of course many more examples of script invention – only a small number of them can be discussed in this MRP. Analysis of script invention should be looked at closely in terms of alternative possibilities for literacy as well as underlying motives, since invention always presents itself as a unique opportunity for research in the sociolinguistics of writing.

VI. 3. Maintaining a Script: Script Maintenance and Internal Digraphia

We turn now to one of the richest areas of the sociolinguistic study of writing. At the same time this is also an aspect which is not necessarily discussed in such a way in the literature; a lot of the phenomena presented here are not necessarily thought of as belonging to the same field of inquiry. While both script change and script adoption are frequently discussed aspects of the history of

writing, a concept which has not gained ground yet is the one which I have chosen to unite all of the following examples: *script maintenance*. It refers to the fact that a particular set of symbols to write one's language is maintained over a given stretch of time. Just as much as there are reasons for change, there are of course also motivations for the absence of it. What becomes especially interesting in this respect is why people maintain something when other groups around them do not. This should be an equally serious and challenging aspect of the sociolinguistics of writing as questions why things have changed. However, it is not only simple maintenance which is of importance for the research in this area. Another closely related field is what I call *internal digraphia*. With internal digraphia I refer to digraphic situations which occur on a non-permanent, spontaneous or temporary basis during times of script maintenance. These internal digraphic effects might eventually lead to additive digraphia. Script maintenance and additive digraphia (category VI.4.) are therefore closely related. When temporary new script usage becomes the required norm, this can be an instance of additive digraphia.

Let us first start with internal digraphia. This term refers to all the script-internal usages of writing, all the contradictions and playful usages which can appear at any moment in using the normal written form of a particular language. It might be helpful to compare this kind of phenomenon to what can happen to languages. Without ever changing its language, a speech community can for example make use of loan words, foreign language material, innovations or code-switches. Certain words can have multiple meanings which they can acquire through being used in a certain new context. While one can easily code-switch from one language to another, the linguistic vitality of a language might never be threatened. The switch is only temporary, although, over time, it is possible that a certain term might become adopted into that language for good. The same can happen with scripts and there is a great deal of variation which one can observe in the creative usage of script.

No one would deny that Roman is clearly an alphabetic type of script. Each letter has its own pronunciation, depending on the language the Roman script is used for. <x> for example is pronounced /ks/ is German. Nevertheless, there are more usages to the simple letter *x* than one

would think of considering only its role in the alphabet. Fig. 5 shows only some of *x*'s possibilities of usage as given by DeFrancis (1989: 261).

The same issue is also mentioned in Glück (1987: 28, 29). He mentions that while some signs are only used in certain areas of social life where they have their specific functions – such as signs for full and half moons on calendars (Fig. 6), the peace symbol or for example smiley faces[8], etc. – many of the symbols present in a literacy tradition are part of the more general inventory of signs (e.g. = % & (; § + etc.). These signs, which do not have a direct connection from writing to phonology but to semantics are what Glück (1987: 28) calls "Begriffszeichen" (*concept signs*).

X as a phonetic symbol:

1. *z* in *xenophobia.*
2. *ks* in *excel.*
3. *gz* in *exist.*
4. *kris* in *Xmas.*
5. *cross* in *Xing.*
6. *ten* in X^{th}. (Compare *dix* [diz] in French X^{e} = *dixième.*)

X as a semantic symbol:

1. The concept '10,' *ten* in English, *dix* in French, *shí* in Chinese, etc.
2. The twenty-fourth item in a serial arrangement based on the twenty-six letters of the Latin alphabet.
3. An unknown quantity, as in $x = (A + B)^2$ and 'Mr. X.'
4. Signature of an illiterate.
5. Command not to do something, as in a symbol of a cigarette overlaid with an *x*.
6. Wrong, as in marking answers to examination questions.
7. Pornographic, as in X-rated movies.
8. Location of an object, such as a dead body in a detective story.
9. Times, multiplied by, as in $2 \times 3 = 6$.

Fig. 5 – The usage of <x>: beyond being a mere alphabetic letter

[8] Such signs might not employ the usual signs of an alphabet and might not correspond to sounds but rather show similarities to logographic signs. Despite having very specific roles and functions in writing a language, they are used and recognized by a large part of the society. Nevertheless they are open to some degree of variation and innovation and they are not standardized as are signs like *, +, &, $, ", etc. Apart from both these two types of concept signs there are also sign belonging to entire systems which are not used by the majority of a society, but which are used by certain subgroups of a speech community and which are even more specialized in their functions. Belonging to this category are "Gaunerzinken", hobo signs, the Braille system, shorthand and various cryptographic systems (Gaur 1984: 186-192; Daniels 1996).

I want to emphasize that despite the fact that these signs are not alphabetic, they should not be regarded as existing *outside* of a script convention which is traditionally considered to be an alphabetic one. These symbols are very much part of a script tradition and their existence and usage depend on the specifics of each particular language. Therefore they should be regarded as a natural element also of alphabetic speech communities. It is not clear to what degree these signs are actually part of a particular script, but can definitely be considered part of the general conventions of writing in a speech community. The contradiction which exists between the officially recognized symbols of an alphabet and the use of rarely talked about symbols of non-alphabetic nature is what makes situations like this one instances of internal digraphia.

Fig. 6 - Signs for full moon, waning crescent, new moon and waxing crescent as seen on calendars

Similar to this, all kinds of other rules and conventions regarding writing and orthography can be considered as belonging to this category, namely the rules which exist as to how to put text on a page of paper, including the norms about the spacing, the quotation marks, the text arrangements, the titles and the first few pages of books, etc. Many of these issues can be very language specific (see DeFrancis 1989: 255-259; Gelb 1963: 230).

Apart from additional symbols which are part of a speech community's written system, there can also be all kinds of other internal digraphic cases with regard to orthography. One example of this is Jaquith's (1976) work on non conventional spellings. What Jaquith has explored in his work is the abandonment of orthographic conventions for specific purposes such as advertising. He considers his examples in relation to diglossia, which is in my opinion not entirely suitable since advertising does not necessarily suggest an inherent H-L distinction (1976: 302). Jaquith not only

calls these instances a type of diglossia but also a form of digraphia, which he defines as when "different versions of a written language exist simultaneously and in complementary distribution in a speech community" (1976: 303). I consider his work a very important contribution to an expanded concept of digraphia and unfortunately Jacquith's work has so far been largely neglected in the history of the subject. Another similar contribution to internal digraphia is the phenomenon of eye dialect (Bowdre 1982). Bowdre points out that the actual usage of eye dialect is not random. He shows that the eye dialect involves context, similarity of appearance of the whole word after the usage of eye dialect and similarity of pronunciation of the replaced and used graphs. Eye dialect is not an arbitrary phenomenon but follows certain rules and has constraints. One has to adhere to these in order to produce successful eye dialect. The environment and purpose of eye dialect can reveal a lot about the social makeup of a speech community with relation to the way a certain community uses writing.

Just like eye dialect, alternate spellings can be used for certain playful or attention grabbing purposes and are often used in logos, company names, slogans, headlines, etc. Harris (1995: 87) considers a very interesting example: EXTRÄAS. The way the word "extras" is written here does not give away its full meaning, if one does not know that this spelling is an allusion to the ice cream company Häagen Dazs, which spells its name also with the odd Scandinavian-looking combination of <äa>. Rogers (2005: 193) brings up the archaic-looking spelling of cases like *Ye Olde Clocke Shoppe*. In a similar fashion, spellings like *Internet C@fe* look modern and trendy (for some). The meaning of these orthographical modifications arises out of the context, and these spellings can have a strong power to evoke all kinds of different meanings if the reader is familiar with its usage, at least on a subconscious level.

Apart from these creative spellings which constitute a break in orthography norms, there has also been some work done by scholars considering writing in public spaces. Reh (2004), who looks specifically at written multilingualism in Uganda, considers writing in the eye of the public as it occurs in one script, the Roman one but in more than one language. Backhaus (2005) looks at public writing in more than one script and multiple languages in Tokyo. Scollon and Wong Scollon

(1998) investigate Romanization and script design and usage in public spaces in Hong Kong and in China. Also the City of Toronto contains a lot of material for such research where script contact is common on street and shop signs, for example, in Greektown or Chinatown.

Another interesting article in this context is an article by Angermeyer (2005) which deals with Russian written in public spaces in New York City and looks at the writing in the context of bilingualism. His findings include all of the following four options of implementing a word, arranged on the square in Fig. 7. The variation Angermeyer finds – he calls it graphological code-switching – is not only determined by grammatical factors such as morphology but also ideologically and socially constrained factors.

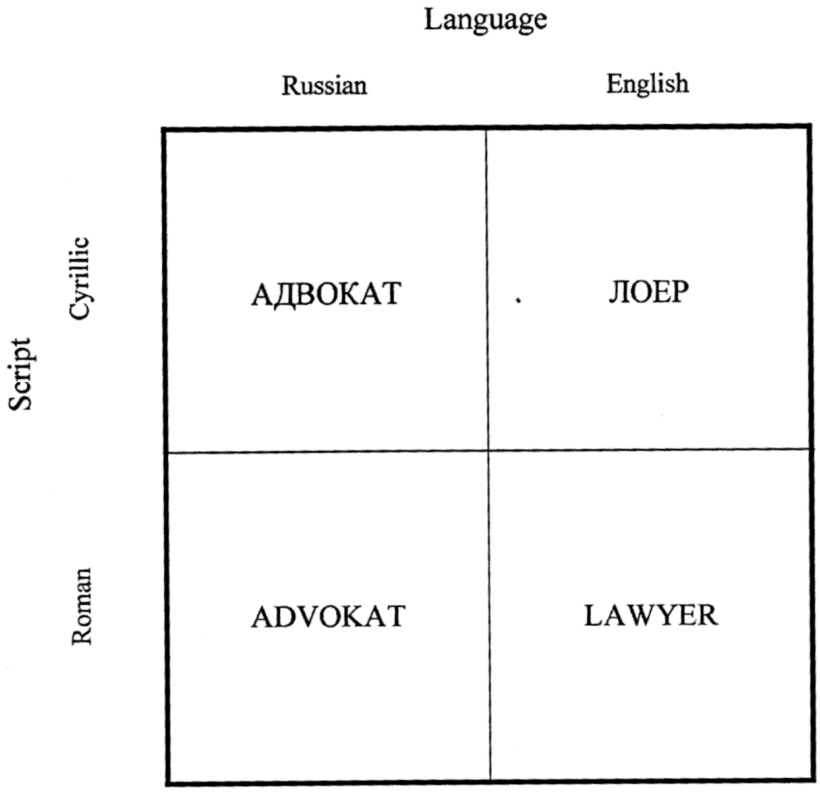


Fig. 7 – Angermeyer (2005): Graphological code-switching between Russian and English

Without changing its script system – and even although there are clear structural criteria which determine which kind of script is used when – there is still some possibility to express additional meanings in Japanese. Smith and Schmidt (1996) explore these possibilities which there are for indexing one's identity with script use. Japanese is written with Kanji, Hiragana, Katakana and

Romaji (Roman alphabet). Hiragana is traditionally associated with women and softness, Katakana with young males and modernity and Kanji with older people and erudition. Romaji are associated with younger females and commerciality. These connotations cannot be explained grammatically or lexically, therefore the authors assume that there is information which can be (consciously or unconsciously) conveyed by the adoption of one or the other script. In order to test this assumption, Smith and Schmidt have collected various genres and studied the correlation between scripts and genres (Smith & Schmidt 1996: 50). Their results showed that, for example, romance novels contain more Hiragana than business-related and mystery novels and that comic books, for example, have a high Katakana share and a low number of Kanji (Smith & Schmidt 1996: 59-67).

A similar study was conducted by Frank (2001), basing herself on Smith and Schmidt's (1996) method. She chose different kinds of magazines, lesbian in-group magazines and media predominantly read by housewives. Her work reveals that lesbian identity in Japan is tied to the Katakana script in order to index modernity and that there are a lot of new, non-conventional usages of Katakana emerging. More Katakana can be found in lesbian magazines and the two types of magazines greatly differ in terms of script usages.

All these examples show that script has to do with sociolinguistic factors which influence its choices, on a script-internal as well as on a script-external level, be it in a mixed script, bilingual or a multilingual setting.

A very important script-internal topic which must not be left out in this respect is the question of style. Calligraphy, fonts and writing styles are a common part of script usage. Harris (1995: 84) provides an interesting example (a similar picture to his is depicted in Fig. 8). Harris remarks that the type of font that is used is recognized as part of the message and that certain fonts are chosen for their associations. In this case this has to do with the message one wants to convey, namely presenting certain items as something valuable and precious. Harris also remarks that how well such a manoeuvre works differs from example to example, but it is evident that additional meaning is present.

Fig. 8 – Expressing additional meaning with fonts[9]

Unseth (2005: 21, quoting Morison 1972) mentions the various styles of the Roman alphabet in his article. He says that at one point in history Roman letters differed in style depending on whether they were used by pagans, Christians or followers of the Bishop of Rome or Constantinople. This kind of internal digraphia undoubtedly bears some similarities to other forms of digraphia, namely an additive one. Out of a mere stylistic variation a further and stronger digraphic situation can develop where the different groups – for example divided by the criteria of religion – become users of different kinds of writing. These groups mentioned by Morison (1972) are still using the same script; however, it is a different phenomenon we are dealing with here. The fact that not only different kinds of script can be used if one wishes to index group membership, but also that one and the same script can become modified in terms of style, shows the many different options there are to make symbolic use of writing.

Roman has a great number of script styles. One of the ones most commented on is the Fraktur font, also called Gothic style. It is often discussed in contrast with the Antiqua font. In Germany the Antiqua form became associated with the Protestant North and Fraktur was used in the Catholic South (Glück 1987: 116). Fraktur also gave rise to a new letter, the ß ("scharfes s"). In the Baroque era, literature was predominantly written in Fraktur, technical and scientifical writing as well as foreign texts were printed in Antiqua. In the 18th and 19th century Fraktur became the default in

[9] Image from http://www.sweetpea.net/img/store/sign.jpg. Retrieved February 15, 2006.

Germany, Antiqua was regarded as the font of the educated, cosmopolitan person's writing. In the 20th century however, Fraktur became associated with the Third Reich and it is barely used today (Augst 1996: 765-767).

A similar occurrence of script-internal variation of style can be seen in the Hebrew alphabet. Since the 15th century two Jewish typefaces have been used, the younger Rashi style and the older Square style (see appendix script no. 41). Rashi was initially more frequently used for texts of a secular type, for rabbinic commentaries, for Yiddish texts and publications in other Jewish vernaculars. Square however was used for sacred Hebrew texts (of higher and lower sanctity) (Fishman 2001: 29). Later, in the Yiddish book markets of Eastern Europe, it was cheaper to just use one style for all publications; furthermore migration transformed Yiddish as it moved eastwards and departed from the previous literary standard (Fishman 2001: 33). In the 19th century usage of the rounded Rashi declined rapidly. It became predominantly associated with orthodox and ultra-Orthodox Jewish culture, since Rashi was at that time only ever encountered in rabbinic writings. Square letters, however, became more and more associated with the average Hebrew and Yiddish speaker and were used as the default for printing, so that eventually Rashi became completely unreadable (Fishman 2001: 34).

As already mentioned it is also possible that script-internal differences in style can lead to additive digraphia. This has happened for example in the Egyptian case. Originally a case of internal digraphia where the Hieroglyphs developed two other scripts, these two new scripts were subsequently used according to different domains (Dale 1980). I will come back to this example in section VI.4.c.

Not all cultures have a strong tradition of calligraphy, but one in which it is very important is Arabic. Striving for a culture specific harmony when writing goes, to some degree, beyond mere style differences can still be regarded as an instance of internal digraphia. Calligraphy itself is such a complex and wide field that it is not possible to explore it further in the context of this MRP. This is why I will limit the discussion of calligraphy to only the brief mentioning of Arabic calligraphy (see appendix script no. 42). In Pakistan, Arabic is written in the Nastaliq style, while the Naskhi

style is dominant in the rest of the Arabic speaking world (Unseth 2005: 21). Naskhi was used from the 11th century AD onwards and was "perfected to become the Arabic style par excellence" (Campbell 1997: 2). Nastaliq is an offshoot of the Naskhi style and it is especially used for poetry in Farsi and Urdu. The Maghribi style developed in Spain and is still used in North Africa. It has its roots in the Kufic, the style that was used for the first written documents of the Koran (Campbell 1997: 2; Jensen 1970: 332).

Let us now turn to the other aspect of script maintenance, namely preservation of a script over a certain period of time. Script maintenance is especially interesting when it is considered relative to "non-maintenance" or when there is a similar group who chose change rather than maintenance. Only when one takes a close look at what other communities have done does the act of refraining from doing something become an event to be studied. I argue here that in script maintenance just as much as in script change, certain dynamics are at play. These sociolinguistic forces become most visible in change, but they are nevertheless undeniably existent in maintenance, since maintenance is precisely becoming visible and interesting to look at due to the change of others. This is not to say that this is the only way one could or should look at script change or maintenance. Without having the other option present (maintenance or change) the *imagined* possibility of change or maintenance in the face of its absence is helpful in making the underlying dynamics visible.

An example which easily comes to mind with regard to script maintenance is the Chinese situation. In the Chinese case there is a strong desire to keep one's script and to preserve the status quo of character writing which also has to do with the strong feeling of national unity which the script contributes to. While one issue involved here is the avoidance of anything which diminishes the status of this important aspect of Chinese culture in a time of ongoing Romanization, another crucial aspect of this case of script maintenance is the fact that character writing makes it possible to treat several not mutually intelligible languages or varieties thereof as one language (at least in their written forms). This is why the maintenance of this common way of writing is essential for the Chinese speech community (DeFrancis 1984: 63). Often character writing is perceived as non-efficient, especially from a Roman perspective. Efficiency in this case is understood not only as

linguistically apt for a specific language but also fit for the modern world of communication technologies. Maintenance of Chinese writing is often discussed in terms of technology development which is thought to be hindered by the characters. Dew (1996) suggests that doubts about the efficiency of Chinese writing are not necessary and he discusses in details which measures can be taken in order to overcome the hurdles of a non-alphabet usage in modern times. Unger (1996) sees the situation more critical since he is doubtful if all the available measures can be considered feasible by an average member of public. Speaking from a practical perspective Unger sees a great chance and advantages for China in digraphia. As already mentioned in VI.4.c. the situation in China can said to be digraphic in that sense that Pinyin (Roman letters) are used for very special purposes in some domains. One could almost go so far as to suggest that a very limited use of an additional script (i.e. the implementation of a form of functional digraphia) is what contributes in a major way to the desired outcome. This is why the Chinese example would be better discussed in category VI.4.c. Although script addition might not be perceived as the most logical step towards keeping things the way they are, we can see that in this example there seems to be a fruitful symbiosis of two strategies, script addition and script maintenance, both united with one goal: preservation of the status quo.

References to cases of script maintenance are not terribly frequent in the academic discussion of writing systems. Unseth (2005: 27) mentions the example of Kyrgyzstan after the fall of the Iron Curtain. He remarks that many countries of the ex-USSR have adopted the Roman alphabet since 1990. Kyrgyzstan however has not done this and has chosen to continue writing in the Cyrillic script. Unseth attributes this to the fact that Kyrgyzstan is less hostile to Russia than some of the other countries. While he does not give clear indications as to what “not as hostile” means, he does not fail to mention that Kyrgyzstan is at least not so hostile as to abandon Cyrillic script, since this would weaken their relationship with Russia, an undesirable outcome for Kyrgyzstan, considering its large Russian population (Collin 2005: 34). This is a prime example of motive number VI.3., preservation of the status quo. While Turkic-speaking Kyrgyzstan might not be particularly happy to keep the Cyrillic script – Comrie (1996: 784) mentions that they have considered switching over

to Roman – the time does not yet seem to be right to induce to severe and wide ranging changes, so that staying in a familiar position seems currently to be the best option. However, Unseth (2005: 27) reports that they have since altered their Cyrillic spelling to make it look less like Russian which seems to fit perfectly with their torn position. Kyrgyzstan – like many Asian speech communities – presents itself as highly exciting material for further research since it seeks the delicate balance to be, at the same time, both associative and disassociative while also trying to preserve the status quo in a changed world.

A country which never allowed its script to be replaced by Cyrillic in the first place was Georgia (Comrie 1996: 782). Its script, Mxedruli (see appendix script no. 2), has been in use since the 13th century and is closely tied to Georgian nationalism (Collins 2005: 30). Georgia resisted the shift to Cyrillic at all costs and it was not possible for the Soviets to get the country to adopt Cyrillic, although they tried in 1978. In 1988 legislation was passed in Tiblisi to make Georgian the only official language and Mxedruli the only allowed script. Between 1945 and 1954 even minority languages in Georgia had to be written in the Georgian script.

VI. 4. Script Addition: Adding a Script to an Existing one (Additive Digraphia)

Additive digraphia can occur in three different ways, depending on whether the speech community and the domain in which the script is used are distinct or the same. Those relations are displayed in the following chart (Tab. 1). The actual speech community using a particular script can be the same, but then the domains where the script is used can be different. This leads to VI.4.c., *functional digraphia*, where a script is added for usage in particular domains.

Additive digraphia		**Speech Community**	
		different	the same
Domain	different		*functional digraphia*
	the same	*synchronic digraphia*	*structural digraphia*

Tab. 1 – The different types of additive digraphia

The opposite case, whereby the domains are the same but the speech community differs, leads to VI.4.a., where the usage of two scripts is determined by socio-political factors (*synchronic digraphia*). Case VI.4.b. occurs when the usage of two or more scripts does not vary over domains or any social groupings. This means that there has to be a different kind of script distribution, namely according to grammatical categories. I call this case *structural digraphia*. I have not considered the case of additive digraphia which is indicated as empty on Tab. 1 since I have not come across an example of it yet, and it is not clear of any examples of this potential category exist at all.

a. Usage according to a Social Factor (Synchronic Digraphia)

This category comprises some of the most prominent cases of the literature on digraphia. In often quoted instances religion is the defining factor which sets groups apart. Examples include Hindi/Urdu as well as Serbo-Croatian. Unseth (2005: 24) sees in these examples primarily the wish to disassociate oneself from another group. This is most likely the crucial motivation here since drawing boundaries towards a different religion has more to do with wanting to show who one is in relation to somebody else rather than to create a completely new identity to stick out from the masses.

Hindustani was originally written with the Arabic alphabet while Northern India was under Muslim rule from the 13th AD century onwards (King C. R. 1994: 9). Urdu (Hindustani in the Arabic script) became the dominant language in India, and replacing Persian, from 1837 until India's independence (King C. R. 1994: 7). When Muslim influence in the region was in decline, Hindus started to oppose writing their language – Hindi – with a script which was so closely linked to the Islamic religion. Instead, they adopted a script which has long been associated with their own culture, the Devanagari script, which was originally used for their ancestor language, Sanskrit (Dale 1980: 9). Subsequently, two varieties emerged out of Hindustani: Hindi, which underwent Sanskritization and Urdu, still written with the Arabic alphabet, which became strongly influenced by Persian. This is a prime example of how a script can help in the disassociation from a rival religion. The wish for disassociation also influences other aspects of a language apart from script, as

for example the make-up of the standard varieties which are heavily influenced by loan words from Persian and Sanskrit respectively (Coulmas 2001: 232). When Hindi and Urdu are spoken on a very formal level, they become unintelligible to speakers of the other language and the usage of two scripts further contributes to this language divergence (King C. R. 1994: 8).

The differences between Hindi and Urdu do not lie only in the script, however, but are linguistic as well as social in nature. Affected are grammar, vocabulary, culture, religion, history, style and literary genres. Script is just one of the most visible aspects of this distinction (Matin, Mathur & Hasnain 2001: 202-205; King 2001: 44). Urdu is written with the Perso-Arabic alphabet (see appendix script no. 6), an adaptation of the Arabic alphabet which was already adapted from Arabic to Persian. The use of the Arabic script for Urdu goes back to the Muslim invasion of India and the Muslim rule which dominated the country for centuries (King 2001: 49). Hindi became a part of India's path to independence from Britain and therefore played a big role in the society. When it was decided that Hindustani should become the language of India, many people were against Urdu, the Arabic variety, being the language of the nation. They opposed their language being written in the Perso-Arabic script. Support for Hindi was especially strong in the North of India in areas controlled by Muslims (King C. R. 1994: 7). However, it was not possible to propagate writing only in either Perso-Arabic or Devanagari. Therefore, both scripts are now used and are strongly anchored in their respective societies (King 2001: 55).

Religion is also the defining factor in many other languages of India. Many of them are written with two (or more) different scripts; which one is chosen often depends on the religion. Punjabi is written in Gurmukhi script by Sikhs, in Devanagari by Hindus (in the state of Harjana) and in Arabic by Muslims (in Pakistan); Sindhi is written in Arabic by Muslim speakers, and in Devanagari by Hindus; the same thing is true for Kashmiri (Dale 1980: 10). These examples are rather extreme for European conditions, but they show in a very neat way how religion is crucial in script choice and how important script choice is for one's sense of belonging.

Croatians, who are mainly Roman Catholics, have always been writing with the Roman alphabet. Since the 10th century AD, Serbian, spoken by Orthodox Christians, has been written in

Cyrillic. This is a case where a religious divide has led to additional digraphia. This also coincides with some other socio-cultural features of Serbians and Croatians, who have now split up into two different countries. Here script has definitely helped two communities distance themselves from one another (Magner 2001; DeFrancis 1984: 61; Feldman & Barac-Cikoja 1996: 769).

The examples of Hindi/Urdu and Serbian/Croatian show some of the problematic issues which arise when dealing with additive digraphia: the questions of what constitutes one language and what is merely a dialect. According to my proposed framework, what happens in terms of literacy should always be considered with regard to one specific language, similar to following a language through the literacy cycle it takes over a number of years. A language can choose several of the decisions listed here in its lifetime; describing the writing history of a language would therefore mean following one language from emergence to death, examining what kind of decisions about writing were made at which point and what the underlying motivations were for it. But what if it is not clear as to whether one decision has to do with two languages or only one? I think it would be useful to look, primarily, at the linguistic criteria to establish whether two varieties could be considered as belonging to one language. Chinese, for example, is considered by linguists as multiple languages (Rogers 2005: 20). The people speaking it however regard it as one language only. We can clearly see the power that writing has: Chinese is easily perceived as one language, partially because there is unity in terms of writing. A case like Serbian and Croatian is generally considered to constitute one language from a linguistic standpoint. Nevertheless, two scripts are employed and many speakers of this language would probably regard it as two separate languages. I am not suggesting here that people's perceptions about what constitutes a language and what does not changes depending on whether one or two scripts are employed. What I am rather arguing is that there are certain socio-cultural and political motivations for people to regard certain languages as mere dialects or as full languages. The choices people or governments make with regards to literacy can mirror these underlying attitudes as options will be chosen in such a way that they fit with the attitudes present in the society. In this way scripts can help to enforce already existing beliefs about

language as well as social order. Scripts alone cannot drive communities further apart, but they can help to do so if it is the wish of communities.

Religion is not the only reason why some groups choose to add another script to their language. When a language is spoken in many different places, it can often happen that the speakers take on the script of the dominant local population. In this way a script can acquire several scripts over time. Choosing to do so might have to do with convenience, with the ease encountered when learning other languages written in that same script or when there is a real desire to assimilate to a different culture. There are some cases where languages have ended up being written in various scripts depending on where the language is spoken, what religion the speakers have or what kind of cultural subgroup they belong to.

Such an example is the one of the Celts. This tribe which lived all over Europe employed different scripts depending on the region. They used the Greek alphabet in Gallia Narbonensis; Lepontic spoken in the North of Italy was written in the North Etruscan script (see appendix script no. 15); Celtiberic was written in the Iberian script (see appendix script no. 16) and the Latin alphabet in various locations (Unseth 2005: 34; McManus 1996a: 655; Collins 2005: 16). A similar situation is presently the one of the Kurds (Collins 2005: 17). They speak various dialects of Kurdish, an Indo-Iranian language, and they live in Syria, Iraq, Iran and Turkey and countries of the ex-USSR. In Turkey they write in a modified Turco-Roman alphabet, in Iraq with a modified Arabic alphabet as well as in Iran, where additionally the Perso-Arabic of Farsi is used and in the ex-USSR republics write with the Cyrillic script (see appendix script no. 6 and no. 17).

All these are examples, where, for certain socio-political reasons, a speech community decided that it was appropriate to add another script to their language. Most of the time this happens where there is somewhat of a divide in a speech community, be it due to religion, geographical relation, ethnicity, current political ideology, culture, etc. This means that certain parts of the speech community develop separately and that they make different choices about literacy. The choice a community opted for in this particular case – category VI.4.a. – was not to use a script which another segment of the community was already using or had opted for, but to choose something

else. Reasons for this might be conflicts within the speech community itself or the desire to have a closer connection to another more important or appealing community. Note that this script addition can also occur in a forced way, meaning that due to political or other reasons, a dominant group forces a group to take on their script; cases like this are, for example, countries which demand that all the languages spoken on their territory use the same script (Unseth 2005: 24).

Adding a script can also be an instance of desired disassociation. Unseth (2005: 24) reports an example from Ethiopia/Kenya. The Daasanach are 34,500 people who predominantly live in Kenya; their language is called Daasanach. About 2,500 of them live in Ethopia. In Kenya, the Roman script is used. In Ethiopia however, a situation occurred where the Daasanach found themselves in a certain condition of rivalry with the more powerful and more numerous Oromo. Since the Oromo use the Roman script, the Daasanach switched to the Ethiopian syllabary (see appendix script no. 18) (Unseth 2005: 24). According to Unseth, this was done deliberately even though their language is not well suited for the Ethiopic syllabary, even though literacy rates among them are low and although this step clearly weakens bonds with the rest of their people in Kenya, who continue using the Roman script.

Category VI.4.a. contains a variety of interesting examples throughout the history of writing. At some point Polish as well as White Russian were written in Arabic by Polish Tartars, Arabic speaking Jews wrote in Hebrew letters during the Arab domination of Spain, and after the Spanish reconquista Arabs living there used the Arabic alphabet for Spanish (Gelb 1963: 227). Glück (1987: 117) mentions that English was once written with Arabic lettering for Indian Muslims, but he cites as his source a book from 1919[10], so I am not quite sure as to when or to what degree this really happened. There is another case, however, where English was written in a different alphabet due to religious reasons. This happened with the Deseret alphabet (see appendix script no. 19) which was created by Mormons in 1853. According to Glück (1987: 117) their purpose was to distance themselves from members of other beliefs and to create something distinctly Mormon. Even parts

[10] Mieses, M. (1919). Die Gesetze der Schriftgeschichte: Konfession und Schrift im Leben der Völker: Ein Versuch. Wien, Leipzig: Wilhelm Braumüller.

of their religious texts were published in Deseret. After only a few years however it was abandoned since it was too difficult to keep up this practice after the death of one of its chief supporters, Brigham Young (Unseth 2005: 26; Houston, Baines & Cooper 2003: 467).

b. Usage according to Grammatical Factors (Structural Digraphia)

Instances where multiple scripts are used in a society without any social or domain distinctions are very scarce. They are sometimes called *mixed scripts*. I prefer not to call them that since, technically, the way writing works in these societies is that people can very well differentiate between the scripts; more scripts than one are used, but not one script system is mixed per se. If there is more than one script used, there need to be somewhat strict rules for their usage. The clearest example of this is Japanese. Japanese uses – as already mentioned previously – Kanji, Hiragana and Katakana and each of these scripts fulfils different functions in a text (Smith 1996).

Chinese language and writing were introduced to Japan around the 3rd century AD. Over time, two syllabaries developed out of the Chinese character writing; *Katakana* developed out of a form of shorthand and *Hiragana* out of a cursive variant (see appendix script no. 20). The seemingly clean-cut structural distinction as we see it today was not always present in Japanese writing. Writing in the Chinese language with characters was common in Japan for centuries. Only later, adaptation started in order to use the characters also for the Japanese language. At the beginning of the Heian period (794-1192), Hiragana was used by women of the imperial court, character writing common among Buddhist priests and a particular style of combining Katakana with Kanji was used by male scholars and court members (Smith 1996: 212; Campbell 1997: 77, 78; Hannas 1997: 38).

Another language which has a somewhat similar system is that of Korean. It also uses Chinese characters together with its indigenous Korean syllabary called Hangul (see appendix script no. 21). But Korean makes only limited use of Chinese characters as compared to Japanese or Chinese writing. In informal domains and everyday writing Hangul is predominantly used (DeFrancis 1984: 60). Chinese characters appear primarily for the Sinitic lexical material in Korean, which forms about 50%; Hangul is used for the indigenous Korean part of the lexicon as well as grammatical endings (King 1996: 218; Campbell 1997: 86). Chinese writing enters Korea in the first centuries

AD via the spread of Chinese culture, Confucianism and Buddhism. Since the 7th century AD characters are also used for the Korean language, although structurally it did not fit the language very well. In the 15th century King Sejong gave the order to create a new writing system for Korean, but the Korean scholars and elite did not make much use of Hangul for about 400 years. In the 19th century a mixed system developed where – similar to Japanese – Hangul and characters co-existed with each other (Campbell 1997: 86, 87; Hannas 1997: 57-60).

The Korean case is not a true example of a full mixed system. Despite the structural distinctions according to which the different scripts are used, certain domain differences (i.e. functional digraphia[11]) can also be observed, where characters are especially dominant for official and public documents and scholarly texts (Hannas 1997: 54). In the last 60 years however, there has been a continuous effort made to eliminate the characters in North as well as in South Korea (Kaiser 2003; Coulmas 2003: 237) (see category VI.6.).

Taiwanese does not possess a standardized orthography. This led to the emergence of an additive digraphia of the mixed kind. For 400 years Taiwanese was written in all Chinese characters, but the usage of these for Taiwanese is not standardized. Since 150 years the Roman script has been gaining some ground in Taiwan, when the usage of Roman originated in the writings of the Christian church. Texts completely written in Roman however only appear rarely currently. Since about 30 years a new way of writing has come about and has become quite popular, namely the mixture between Roman and Chinese characters (Tiu 1998: 227-229). Roman elements are used for grammatical function words, loan words, onomatopoeia, Taiwanese native content words or if the characters are not standardized (Tiu 1998: 237), whereas Chinese characters are used when the meaning is unambiguous. Tiu sees this kind of digraphic situation as a chance for Taiwanese to make the connection between tradition and modernity and regards the emergence of this mixed system as a sign that people are adapting writing according to their needs (Tiu 1998: 244).

[11] The fact that Korean experiences not only structural digraphia, but can also be regarded as an example of functional digraphia, does not prevent it from being discussed in the category VI.4.b. Rather than two scripts which are employed in only a synchronic and/or functional digraphic manner and never encounter any "mixing", digraphia in the Korean case basically always involves also structural digraphia to a greater or a lesser degree.

Cases where there are several scripts used depending on linguistic criteria are of course rather rare. Apart from Korean, Japanese and Taiwanese there is only one other example which I have found in the literature. This is the way the Uyghurs used to organize their writing for a certain period of time in the literacy history of their language (Unseth 2005: 34; Kara 1996: 540). Uyghur used a mixed script consisting of Chinese characters used as logograms and the Uyghur alphabet. Nouns were written with Chinese characters, but were read in Uyghur, and the suffixes were added in the Uyghur alphabet (Kara 1996: 541). Neither Unseth (2005) nor Kara (1996) report about any reasons as to what could have motivated the Uyghurs to do so.

c. Usage according to Certain Domain or Register Differences (Functional Digraphia)

A third possibility for the addition of a script is if a script is added to be employed by all segments of a speech community but its usage differs according to domains, registers or social functions. In his 1980 article Dale discusses what happens when a script change does not happen quickly enough:

> "[I]f a new script is introduced for purposes of efficiency or modernization, the older script may continue for some time in more traditional uses." (Dale 1980: 6)

Since Dale (1980) only assumed two kinds of digraphia – what he called synchronic and diachronic – he could not find an easy resolution for the simultaneous existence of two scripts. With the assumption of additive digraphia of the third kind – *functional digraphia* – this problem is resolved. If a new script is added and the older one is not immediately abandoned, then both of them will be present but will to some degree differ according to what kinds of functions they are used in.

A prime example of how internal digraphia can lead eventually to additive digraphia is the example of Hieratic and Demotic (see appendix script no. 22), cursive versions of the Egyptian hieroglyphs (Dale 1980: 7). The Hieroglyphs dating from the 3rd millennium BC have over time developed cursive variants. The first one of these was Hieratic which was then used for "non-monumental texts of all sorts" (Dale 1980: 7; Ritner 1996a: 81, 82). Out of this, another cursive variant, Demotic, even more cursive than Hieratic, developed. Dale (1980: 7) reports that these

variants were used for Egyptian for a number of centuries. What has started as a case of internal digraphia, different writing styles for one script, has developed into a fairly stable situation where these variants became associated with different domains. Hieroglyphs were used for monumental inscriptions or for very formal or ritual occasions, Hieratic was used by priests in order to record literary and religious texts and Demotic was the script of business interactions and daily life used by the members of the general public. Here the differences in writing purposes are clearly visible. For Dale (1980: 7), however, this case is only a case of "marginal digraphia", since structurally the three systems were identical and only the actual symbols differed. What needs to be accounted for in cases like this is *exactly why* two other systems have evolved. I did not find any hints regarding this in the literature. Fischer (1989: 62) mentions that due to the development of Hieratic and Demotic, the actual hieroglyphs changed little, since they were always written more or less in the same way:

> "The representational character of the hieroglyphs is underscored by the fact […] that a more cursive style of writing, written in brush and ink, was evidently in use as early as hieroglyphs. Evolution in the interest of greater speed and efficiency was channeled along this separate but parallel track, leaving the hieroglyphs themselves relatively immune to change." (Fischer 1989: 62)

This could mean that due to the emergence of two cursive variants, the Egyptian Hieroglyphs were able to be kept from undergoing too much evolution which scripts would go through naturally over time. The desire to preserve the status quo could be a reason for this: one adds domain-differentiated script in order to keep the one sacred writing system "clean" from change. This might not have been a deliberate decision, but the one script could have been considered so sacred that, as a useful option, a situation of additive digraphia came about. Hieratic was initially more of a secular script, although after the Demotic script came into the picture it was not used as frequently any more; and was used mainly by priests and sometimes merchants (Jensen 1970: 70, 71).

In the 1940s the Mongolian script (see appendix script no. 23) used in Mongolia was replaced with the Cyrillic alphabet. After the fall of the Iron Curtain some Mongolians called for a reinstatement of the Mongolian script. A full replacement, however, did not succeed and in the end the script became used only for special purposes (Grivelet 2001b).

Before Cyrillic was first adopted in the 1940s, Mongolian underwent the Soviet Latinization policies which were part of the 1920s Russian language policy and planning effort (Haarmann 2004: 111) for many languages on Russian territory (Grivelet 2001b: 76, 77). Therefore knowledge of the Mongolian script has decreased over the decades so that the script usage almost disappeared completely, but when the Cyrillic alphabet was introduced the literacy rate increased considerably. At the end of the 1980s, steps were taken to reintroduce the Mongolian script to some degree in school teaching and later plans were even made to change back to the indigenous writing system of Mongolia completely by 1994. However, it was very difficult for the population to acquire literacy in the old script which had not been used for generations. Eventually, due to growing criticism from the public, the government could not fully implement the reform (Grivelet 2001b: 78-80). The Mongolian people felt that Cyrillic was easier to learn and more efficient. While they do consider the Mongolian script to be of symbolic prestige and tradition and see it evoking memories of a glorious past, they feared that by only using Mongolian script they could become isolated on an international basis. Ultimately, since people were torn between what they believed was the more practical Cyrillic and the traditional Mongolian, to which they were emotionally attached, they entered an additive digraphic situation. Now, Mongolian is used for symbolic and decorative purposes: for billboards, posters and signs, some publications, some advertising, graffiti, etc. These mere symbolic uses of the script were obviously enough to fill the demand of the population for uniqueness (Grivelet 2001b: 85-91). Neither Kara (1996), Grivelet (2001b) nor Caodaobateer (2004), the latter of whom mentions briefly that Cyrillic is not used by Mongolians in China, give details about the relation between Mongolians in China and in Mongolia. It is therefore not clear if there was ever the desire to re-unite in terms of script with those Mongolians who live in China.

Some also consider the Pinyin system for Putonghua to be an instance of (additive) digraphia. This Roman auxiliary alphabet is used in a few specialized areas, such as transcribing Chinese names, annotating Chinese characters, for education of the deaf and the blind, for library cataloguing and other areas where alphabetized lists are key. Limited attempts have been made to develop Pinyin further into a full-fledged script for Chinese, and so far it has already been

incorporated into the literacy education elementary school children. We can see that the choice to allow functional digraphia for limited very specific purposes has had the effect of keeping the Chinese characters firmly in their place and to preserve the unity of Chinese writing throughout the country (DeFrancis 1984: 64).

Zima (1974), one of the early scholars to take up the issue of digraphia, describes in great detail the digraphic situation of Hausa, which was – at the time of publication of his article in 1974 – still a situation of additive digraphia according to domain differences. Since then the situation has changed and Latin has been adopted while Arabic has been abandoned. Arabic was the first alphabet adopted for Hausa (Zima 1974: 60). Zima writes:

> "While the ties between Arabic script, language, and Islam at particular moments facilitated its penetration, similar though not identical links between the Latin script and the Christian missions did little to propagate the script and even occasionally discouraged the Hausa people, oriented towards Islamic culture, from using it. Nevertheless, the strong administrative backing […] and assistance of certain mass communication media in subsequent periods contributed to the relative dissemination of the usage of the Latin script for Hausa as well." (Zima 1974: 60)

Zima attributes this situation to the fact that there was not only language contact with the Arabic language and script but also a strong cultural and religious influence from the Arab world (Zima 1974: 62). Roman script was brought about with contact of English and French via the invasion of Nigeria by the British; these languages were also the ones used in the areas of higher education. Also, depending on with which script Hausa was written, different loanwords would come in from various donor languages (Zima 1974: 63). Zima mentions Latin being used for administrative and educational purposes and other areas of public life, prose literature, science and technology and political texts. Arabic is used in the domain of religion and some kinds of literature (religious poetry) as well as "traditional administration and law" (Zima 1974: 67). It seems that the domains of usage are not very clear-cut, as he mentions that there is still a certain amount of free variation, namely in "traditional business and finance", letters, and modern poetry (Zima 1974: 67). What we are dealing with here is the fact that despite being allocated to rather "stable" domains, there is still room for free variation – which, according to my framework, would fall into the

category of additive digraphia of the first kind (synchronic digraphia). We are dealing here with a situation where:

> "the choice of script, or rather the choice of the particular *written form* of Hausa, depends on the personal factors of either scribe or readers: such individuals or group qualities as cultural, religious or educational affinities, sympathies or taste play a primary role in the choice of the particular written form used by Hausa-speakers when writing texts pertaining to this group." (Zima 1974: 67, emphasis in original)

Hausa speakers seemed to use script not only according to certain "clear-cut" domain differences but at the same time as it fit to their affiliations and motivations (e.g. westernization, modernization, etc.). It is especially true for difficult and complex cases like the Hausa case that an all encompassing and flexible framework can be useful to place phenomena like this into a context where all kinds of digraphic situations can be analysed in a systematic manner. For cases of additive digraphia this means that what seems to be case is that often two factors of additive digraphia come together: either functional and structural ones as in the Korean case or, as in the Hausa example, synchronic and functional ones. Further research would be necessary to clarify the relationships that exist between the three different forms of additive digraphia.

VI. 5. Script Modification: Modifying one's Own Script

That spelling is less of a political issue than script change has been suggested by Fishman (1988). An opposite opinion is held by Coulmas (1989: 260), who see issues of orthography – spelling being the most obvious and visible part of language – as particularly challenging and difficult in terms of bringing about reforms.

Although category VI.5. is called *script modification*, this category does of course not only contain modification of script itself but also of the way the script is employed – *spelling modification*. As systems get older, they "move away from phonemic representation"; as they transform themselves over time they also tend to encode more morphological and lexical information in the orthography (Coulmas 1989: 230). Coulmas (1989: 261) sees writing reform as a "social experiment", where sociolinguistic factors interfere with purely structural aspects. He calls for more research to evaluate the outcome of reforms. Modification has to do with getting rid of the

problems which are present in a writing system when a spelling is not suitable for a language anymore, when symbols or diacritics need to be added or there are other irregularities which make reading and writing difficult.

Not all languages using alphabets of the same name actually look the same when they are written. As already mentioned in category VI.2.c., any of the modificational tools listed below can be involved in first time script adoption as well as in various forms of diachronic digraphia. Due to these modificational processes even two languages which are normally thought to be written in the same script can look very different from each other. Glück (1987: 25) calls the scripts which are employed slightly differently in each language but whose symbols are identical for the most part Roman-*based*, Cyrillic-*based*, etc. With this he refers to the fact that literacy in these languages consists of the usage of "basic alphabets" (*Basisalphabete*, such as Roman, Cyrillic, etc) as well as the employment of one or more additional orthographical norms as listed in the possibilities of modificational digraphia below. While the modificational practices discussed here are the same in "plain" modification as well in cases of script adoption + modification, the processes of how modification comes about differ slightly. In "plain" modification, the script or the spelling undergoes some kind of reform, without any other form of digraphia to be present, whereas in the other instances modification occurs at the moment a script is adopted (for the first time or at a later stage in the literacy history of a language). In category VI.5. I only consider the plain variety of modification, where the steps for change are taken script-internally, quasi out of a script maintenance state, separately from any other digraphic actions. Wells (2001) gives a very detailed overview of the various possibilities for modification. Without going too much into detail on this topic I only want to give a brief overview of the toolbox of modificational digraphia, basing myself and expanding on Wells (2001), Unseth (2005) and Coulmas (1989).

(1) Character addition: examples are frequent, consider the Icelandic <Þ, æ, ð>, the French <œ>, the Turkish <ı> or the Danish <ø>.

Here are some of the signs which have been, or still are, used among the usual 26 letters of the Roman script and which are not part of the Roman standard symbols (Fig. 9):

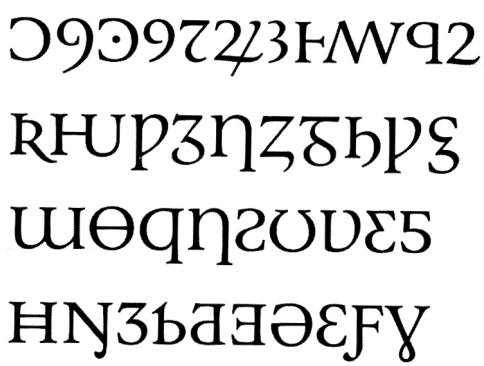


Fig. 9 - Unusual symbols used with the Roman alphabet as listed by Stötzner (2006: 40)

Wells (2001: 251) makes an additional distinction within this category which should also be observed. As already visible from these examples, character addition can come about through ligatures (<æ>, <œ>); they can enter from foreign alphabets (in this case <Þ> comes from Runic). <ø> looks like the addition of a diacritic, but <ð>'s shape does not exist yet in the Roman alphabet, although is does show similarities to <d> as well as <ð>. As we see here, the situation can often be tricky and far from clear-cut. Despite the existence of some subcategories, I have decided for the purpose of this paper to consider them as one group. It is not always easy, as Wells already mentions, to make a clear distinction between what counts as a digraph (see below) and a new character. <ß>, originating from the Fraktur shape of <sz>, evolved into a separate letter through an initial ligature, but is treated as a separate entity today, at least in lowercase. In upper case it is still written as <SS> or sometimes still <SZ>. The question arises as to where to draw the boundaries between digraphs – which fall under category (2) and ligatures, which are part of category (1).

Within modificational digraphia, the state of affairs is in constant flux. The German scholar Thorwald Poschenrieder, for example, suggests the creation of a new letter for German, namely a capital letter of ß, which does not yet exist. Since it is used in Germany and Austria (only Switzerland has abandoned it so far) and there are problems in writing ß in capitals, a "big ß" would be useful. He thinks that the ß is a part of the German language and culture which should be protected and that this is more important than being able to connect internationally in uniformity (Poschenrieder 2006: 13). The creation of new upper case letters is not as uncommon as one might

think. Wells (2001: 252) brings up West African languages in Ghana which use Roman and have adopted some IPA symbols and also created upper case versions for them, such as Ɔ, , and .

(2) Digraph creation: a digraph (Wells 2001: 250; Rogers 2005: 16) is a combination of two letters representing one sound. Trigraphs can also exist, as the German <sch> shows. An often quoted digraph-joke can be found among other works in Gelb (1963: 225): <ghotiugh[12]> pronounced as /fish/.

(3) Diacritic addition: that even diacritics (and what constitutes one) can be a tricky subject is shown by a Turkish example (Wells 2001: 253, 254). In addition to <I> and <i>, Turkish also has the letters <İ> and <ı>. When the new letter <ı> was added, <I> became its upper case equivalent and <i> was paired with <İ>. This situation suggests that <ı> was regarded as the default option to which a dot was added in the case of <i>. While the dot addition in <İ> clearly seems like the addition of a diacritic, the same clearly cannot be said of <i> where the dot is regarded as a natural part of the letter and not a diacritic.

Wells (2001: 255-265) shows in great detail that one diacritic can have different functions and meanings in different languages. Well known and frequent accent symbols like acute, grave and circumflex act just as different in all the languages as do caron (also called wedge or hacek), breve, macron or dots. He also explains with examples the usages of diaeresis, tilde, double acute, ring, hook (all added above letters); slash, bar, horn, cedilla, comma, tail, and dot (added below or at the same level as the character). The most striking example of the use of diacritics is undoubtedly the Roman alphabet as it is used for Vietnamese, but this is not an instance of modificational digraphia since this kind of addition came about at the change to Roman from Chinese.

(4) Spelling: rules and conventions about letter usage

Coulmas (1989: 260) gives an example of spelling from the Dutch and Belgian reforms, where unified spelling was supposed to be established in both countries. Coulmas reports:

[12] <gh> as in *lau**gh***, <o> as in *w**o**men*, <ti> as in *na**ti**on* and <ugh> as in *thoro**ugh***.

> […T]he commission found themselves in disagreement because the desire to create unity was countered by a desire to be different; different that is, not with respect to each other, but with respect to neighbouring languages." (Coulmas 1989: 260)

He and Geerts (1977: 234) refer to the situation where if <c> was to be used, this would be too close to French for the Belgians and if <k> was be used it would be too similar to German for the Dutch. Such examples are the best evidence that the reactions towards spelling reforms can be and are influenced by socio-political conditions present at that time and place. Here the need to be different not from each other but becoming different from their neighbours becomes the crucial issue. Geerts (1977: 234) remarks that some of these issues are not always discussed by language reformers. Referring to being similar he says:

> "The opposite case has been less fully documented, namely, that in which communities have desired a more distinctive writing system, one that would more effectively differentiate their language from others with respect to which they sought not similarity but dissimilarity. […] This important parameter in Dutch spelling reforms has created in the past and could create again in the future strong centrifugal tendencies with respect to the languages from which different groups desire to be different." (Geerts 1977: 234)

This is not the only example of where a spelling which resembles another language too much can be problematic for political or socio-cultural reasons (Coulmas 1989: 259). As Coulmas (2003: 235) points out another issue to be considered here is not only the real linguistic outcomes of reforms but the questions whose language it is and who is entitled to make decisions about it.

(5) cases: is there an upper case or not and if yes, how is it used?

Also this kind of modificational digraphia can have its political implications. German is still holding on to upper case in its orthography, although complete absence of upper case letters is common in email or chat conversations, at least among younger people. Winter (1983: 236, 237) remarks in terms of German upper case that practicality cannot be regarded as the "be all end all" of alphabet making and that what a system is judged by is a connection of linguistic as well as socio-cultural and political considerations.

An extreme case of modificational digraphia is the case of the Dehong Dai communities. Their writing is called Tainüa (see appendix script no. 24). This system was brought to the Dai in Dehong

in the 14th century AD. For Buddhist practices however, another system was predominantly used (see Zhou 2003: 335). Zhou says that it is the distance between Tainüa and Buddhism that script reforms were easier and made more possible (Zhou 2003: 335). Tainüa was first used in schools as medium of instruction in the 1950s. Because of a problem with the phoneme representation of the language the system was reformed in 1954 for the first time; additional characters were added into the system. Two years later another reform was finalized, this time a standard dialect as a base for literacy was chosen. The number of letters was changed again, and the symbols for the tone markers were also replaced with different ones (Zhou 2003: 338, 339). Eight years later a third reform was implemented, some letters were added again; the tone symbols changed again, as well as some letter symbols. In 1988 a fourth and final reform was carried out: the tone markers were changed back to the ones of the second reform. This system, as proposed by the fourth reform, is now used in schools and also in some newspapers. Surprisingly, the Dai have not really objected to these changes. Some parts of the reforms were actually initiated because of complaints by the public about previous reforms (Zhou 2003: 341, 342).

An example where one can clearly see the political and cultural factors associated with modificational digraphia is the case of the simplified vs. traditional Chinese characters. Simplified characters have been in use in the People's Republic of China since the 1950s, but they have not been adopted in Taiwan nor in immigrant speech communities overseas (Unseth 2005: 21, Coulmas 2003: 237). This modification was greeted in these communities with a desire to hold on to the previous orthographic system, namely the maintenance of the traditional characters which involved the rejection of the modified ones. When these two speech communities are compared and if their socio-political background is taken into account, it becomes clear how much the rejection as well as the adoption of modificational digraphia can both have political impacts and reasoning behind them.

VI. 6. Script Elimination: Eliminating a Script (Subtractive Digraphia)

As already mentioned previously, the creation of three kinds of digraphia – additive, subtractive and diachronic – instead of two categories of digraphia as proposed by Dale (1980: 6), namely diachronic and synchronic as he called it, has solved the problem of category overlap. After additive

digraphia has led to a period of coexistence of two or more scripts, elimination can occur; this can also be a case of a quasi "drawn out script change" where a reform does not occur swiftly enough. I find that for a theoretical discussion on the subject it is useful to keep these three possibilities – adding, eliminating and changing (switching) – separate. Just like the category of additive digraphia, subtractive digraphia also entails different kinds of subtraction. I have decided to make the distinctions here according to what kind of additive situation gets abandoned by eliminating a script.

a. Eliminating one of Multiple Scripts used according to Certain Social Factors

In this example, the language finds itself in a situation where multiple scripts are used according to social, geographical or other boundaries. For some reason, after staying in this situation for a certain amount of time, steps can be taken to eliminate one of the scripts used, or all but one. Examples are not extremely frequent, but cases like these do occur.

Albanian was written in a number of scripts throughout the centuries: the Roman alphabet, the Arabic alphabet and the Greek alphabet. The Roman one was associated with Catholicism, widespread in the North of Albania. Since the 18th century Greek was frequently used for Albanian. This was mainly in the South or among Albanians abroad (Skendi 1960: 264) and it had entered Albania with merchants, Byzantine authorities and Eastern Orthodox priests. Also Arabic was present, due to the Ottoman armies and Muslim missionaries (since the 15th century AD) and it was not only used for religious but also for secular purposes. The majority of the country was Muslim in 1908, the year of the Monastir conference where the fate of Albanian writing was to be decided. Albania was more or less divided by region and religion. According to Trix (1997) the Albanians did not want to be perceived as a disunified country and some people called for the implementation of one alphabet for the whole country which could give them a stronger sense of unity. Different kinds of Roman based scripts were proposed, and there have even been some regional creations of original alphabets for Albanian (e.g. Elbasan script, used only in the city of Elbasan for a few years; see appendix script no. 25) (Trix 1997: 3-5; Skendi 1960: 266). Ultimately, at the Monastir congress two Roman based scripts were chosen: the Stamboul alphabet (which included some

Greek letters) and a more neutral script with some digraphs called Bashkimi (see appendix script no. 25). Stamboul was appealing since it was more distinct than a plain Roman one and Bashkimi was thought to be useful for international communication (Trix 1997: 19; Skendi 1960: 272, 273). Trix remarks that there was not one specific language or culture which Albanians wanted to be similar or dissimilar to at that time and that this is why the choice of an alphabet did not yield one clear result. The reason for this is – as suggested by Trix – that Albanians felt that they were in a way torn between the desire to be looking inward towards Albania and outwards to the world at the same time (Trix 1997: 20, 21).

Since Yugoslavia has been divided into several new countries, Croatia has gotten rid of the Cyrillic alphabet for Croatian. Script differences in Serbia and Croatia have always been tied to religion but now, even more strongly than ever, this is also tied to nationalism (Feldman & Barac-Cikoja 1996: 769). If one considers Croatian to be a separate language one could say the Cyrillic alphabet was eliminated; if not, then one could consider it partial elimination, since only one segment of the speech community (Croatia) has eliminated one of the two alphabets used. Cyrillic is not, for example, taught in Croatian schools any longer. Serbia still uses both scripts to some degree, but Roman is diminishing there too. Over the last years script has become a political issue in Serbia and Croatia (Feldman & Barac-Cikoja 1996: 772). This example shows that while the underlying motive – the desire to disassociate – from a neighbouring culture has never really changed, the way this disassociation is being carried out is changing. While the realm of religion was an expression of this in earlier times, politics has now taken over. What remains the same, however, is the role script plays in this and the motives which are associated with it. I believe that assuming certain more general motives, which can then be filled with more specific reasons depending on the actual case (such as religion, politics, etc.), is a very useful thing to do.

There are also other cases where full script elimination is desired but has not yet occurred. Both the Romani language and the Kurdish language are spoken by people who do not have a state of their own. Both of them have in common the fact that they are written with a variety of scripts and

variants of scripts. Both languages have made efforts to establish a standard script for their languages but this is, of course, not an easy undertaking.

Kurdish is written with different scripts, depending on where the language is spoken (with a modified Arabic script in northern Iraq, a modified Roman system similar to the Turkish one in southeastern Turkey, modified Arabic and Perso-Arabic scripts in western Iran and in Syria, and the Cyrillic one in the countries of the former USSR; see appendix script no. 6 and no. 17) (Collin 2005: 16). However, there are efforts being made, for example, by an organization called the Kurdish Language Academy (KAL) – which maintains a very informative website – to eliminate other scripts and to push for the usage of Roman only. They have created an alphabet called the Unified Kurdish Alphabet which is based on Roman. It is their goal, in this way, to unify Kurdish speakers all over the world in order to promote literacy in Kurdish and ultimately unify their people (KAL online resource).

Romani, the language of the nomadic people originally from India, is in a very similar situation. Its various dialects are used all over Europe and written in mainly Cyrillic and Roman alphabets (Matras 2004: 5-9). The sub-variants of these scripts differ heavily in terms of orthography in each country. Romani, being an oral language for most of its history, only developed literacy in the middle of the 20th century. In its initial stages, the script of the majority language of the country in which the Romani speakers resided was used (Kenrick 1996: 110, 111; Matras 2004: 4). Several efforts have been made throughout the decades to establish a unified and stable written form of the language, but all efforts have failed so far (Kenrick 1996: 116-18). One of the last known efforts was an alphabet which had been proposed by Marcel Courthiade in 1990 (Kenrick 1996: 118; Matras 2004: 9, 10), however this has not been universally accepted outside of Romania. The alphabet created by Courthiade took into account the dialectal variation that is present in Romani and was constructed in such a way ("poly-lectal") that would have allowed for different standards in pronunciation (Matras 1999: 491). Some of the members of the Romani speech community are in general opposed to writing their language and prefer oral transmission, since codification is seen as an intrusion from the outside (non-Romani) world (Matras 1999: 483).

Matras (2004) describes that despite not having one fixed written standard, there is still effective communication, as there is more of a pluralist approach to a "standard orthography". Without having a central political authority and with the spread of the Romani community over so many countries, it is very difficult to impose a unified script. According to Matras, the tendency of written Romani is to move towards a more dynamic and flexible usage of various Roman based orthographies where norms for literacy are more locally and mutually negotiated rather than imposed from one central authority (Matras 2004: 21).

b. Eliminating one of Multiple Scripts used according to Grammatical Factors

Since cases of structural digraphia are already low to begin with, cases of its elimination are also rare. Only one example could be found, the one of Korean spoken in North Korea. However even this example does not constitute full elimination for two reasons: firstly, the elimination of Chinese characters has not occurred for all of the Korean speech community but only for North Korea and secondly, the implemented reforms have been subject to some modification in the past. Chinese characters have been reintroduced into the North Korean school system and while they are not used actively, one can still speak of a passive application of the characters. These two reasons make this example less prototypical than it could be, but it nevertheless is an instance category VI.6.b., elimination after a phase of structural digraphia.

Despite having invented an original writing system for Korean in the 15th century AD, Korean could not live without the characters. For the elite, Chinese characters were still the preferred form of writing (Hannas 1997: 51). Hannas writes:

> "[H]angul, for most of its history was regarded as a poor person's substitute for real writing, which was either classical Chinese [..] written in characters or stilted Korean written in Chinese characters" (Hannas 1997: 51)

This situation had the effect that a lot of Chinese loanwords were brought into the language. For a long time Chinese characters, which coexisted with the Korean Hangul system, were used for Sinitic loanwords, in technical and scholarly publications and in more formal genres. Furthermore, they also were used as a mixed script together with Hangul for less formal writing (Hannas 1997:

51). The Japanese occupation however - under which Hangul writing was forbidden – strengthened the status of Hangul (Kaiser 2003; Coulmas 2003: 237) and since then it increasingly became the script of choice for the Korean people. After North and South Korea split up, North Korea decided to eliminate Chinese character writing completely, since Hangul had become associated with Marxist-Leninist ideology as well as with the notion of North Korean "self-reliance". Since 1945 South Korea has also strived for character elimination but has had difficulty succeeding with the reform. North Korea implemented the reform very swiftly and among its goals was the promotion of literacy and the wish to stress the importance of nationalist and indigenous elements of (North) Korean culture. After a few years however, North Korea realized that the reform which was so quickly implemented, had created some problems since it was difficult for people to read ambiguous Sinitic elements without characters (Hannas 1997: 65-67; Hannas 1995: 252, 253). Unseth (2005: 25) sees in the North Korean elimination of characters an instance of distancing from the South. Despite efforts to promote all-Hangul writing, South Korea still uses characters. In most of the South Korean literature, in popular writing and in newspapers the usage of Chinese characters decreased over the years but the change has been more gradual than in North Korea. To some degree South Korea still uses characters for the Chinese elements in the Korean lexicon (Hannas 1997: 51, 52). A full reform like the one in the North lacked support in the South (Hannas 1997: 69). Due to the high amount of Chinese lexical material, all-Hangul writing was difficult and the habits of the society were hard to change (Hannas 1995: 256, 258; Hannas 1997: 72). In Unger's (1996: 49) opinion, full elimination is not going to happen as long as there are two Korean states, especially since North Korea has already taken steps towards elimination. Hannas remarks that – different from the Japanese case, where characters are firmly anchored in the society, Koreans do not feel such a close connection to Chinese writing and it is therefore easier for them to shift away from them (Hannas 1997: 53). While South Korea still uses characters to some degree, North Korea does not use them in writing but has reinstated them into the school curriculum in order for people to have at least a passive knowledge of them (Hannas 1997: 68; Hannas 1995: 254, 256). North

Korea has even tried to weed out Sinitic terms, in order to get rid of problems with all-Hangul writing, but these efforts have also been unsuccessful (Hannas 1995: 260).

c. Eliminating one of Multiple Scripts used according to Domain or Register Differences

A third possibility for subtractive digraphia is the elimination of a script which has been used in certain domains only while another one was used for other purposes. In functional digraphia scripts are used next to each other in a speech community and over time the exact distribution of their usage can vary. One script can become more powerful at some point and take over a few more domains while the other is pushed back (e.g. into the liturgical areas) and slowly loses ground. This kind of power struggle seems to be a normal process and should not be considered subtractive as long as still some domains are present for a script. Only when all domains have been lost and script abandonment is final should one speak of script elimination. Unfortunately, although examples for this category are not rare, exact and accurate descriptions of actual cases – together with enough socio-political background information – are hard to find. Very often the abandonment of one of two scripts is merely reported in the literature without going into the details of what kind of additive situation was abandoned. If it is clear that it was a functional one, rarely is one able to ascertain the exact account of how and why this elimination came about. For the sake of this paper I will limit myself to presenting the example of the Glagolitic alphabet, although I am certain that the long and winding history of writing could still reveal more examples of this kind.

Many Slavic languages, among them Bulgarian and Macedonian, used both the Glagolitic as well as the Cyrillic but eventually eliminated the Glagolitic script. Bulgarian and Macedonian did that in the 13th century. In Serbia, Bosnia, the Czech Republic and Poland Glagolitic was also used, especially in Church practices, but was eliminated in all of these languages by the 16th century. In the Croatian area however, it could hold longer, despite the fact that the region was predominantly Roman Catholic. Cubberley attributes this to the fact that the Glagolitic alphabet became a symbol in Croatia for the religious independence from Rome. Until the 17th century it was still used outside

the Church in Croatia, especially on the Adriatic Islands, but in the 19th century it faded away completely (Cubberley 1996: 349, 350).

VI. 7. Script Change

VI. 7.A. Script Change (Diachronic Digraphia)

We arrive now at one of the most frequent categories of digraphia: diachronic digraphia. Despite the fact that this category is overall very common, a closer look at some of the possibilities for change show that some options within this category are not as popular as others. If change can occur at all depends on the situation that a language is in: if there has been little use of writing in general in the past (e.g. due to low literacy rates), change will probably be implemented more easily than if there were a tradition of centuries of writing. Fishman expresses this constraint perfectly in this quote:

> "[T]he greater and grander the tradition of literacy, literature, and liturgy in an orthographic community, the less likely that even minor systematic orthographic change will be freely accepted and the less likely that any orthographic change will be considered minor." (Fishman 1977: XVI)

Unseth (2005: 35) has also touched on this subject. For Fishman (1977: XVI-XIX), writing change can come in four different shapes: either successful or failed reform coming about either independently or as the result of a revolution. While this distinction is definitely valid in some aspects, I have decided to choose a different kind of typology. I find that the concept of a "failed reform" is not really necessary as a subcategory of "script change", since if the reform does fail one can use a different kind of category at this point to describe what alternative steps were taken instead. Also I find that the term "revolution" provides maybe too narrow a look on the issue since a revolution, or the absence of it, should not be regarded as the only possible socio-political occasion around which digraphic action and choices can occur. There can be much more going on politically, militarily, economically and historically in society than the term revolution could capture. Therefore I find it more suitable to draw on the seven motives which I have laid out in chapter V.

a. From a Dominant Script to a Unique Script (with or without Modification)

The first subcategory is one where a dominant script is abandoned for a unique one. Cases like this do not happen very often and it was very hard to find even two examples. Unfortunately – as already mentioned previously – only few discussions on script change include the sociological data necessary to conclude what might have been the motives for that change; in order to gain these insights very detailed studies on one particular cases are necessary, which is unfortunately beyond the scope of this MRP.

The Meroites lived in the Ancient kingdom of Meroë in the Sudan. From the 3rd century BC onwards they had their own script, called the Meroitic script, which shows some similarities to the Egyptian one (it also had a hieroglyphic and a cursive variant; see appendix script no. 26). After the empire fell apart in the first half of the 4th century BC, Millet reports that the Meroitic script was also used for languages spoken in the kingdoms which followed the old empire. These were Nubian languages but no actual texts have apparently survived. After Christianity came to the Nubian Nile area the Coptic alphabet (see appendix script no. 27) was adopted in the 6th century AD – an option which also shows similarities to neighbouring Egypt (Millet 1996: 84; Jensen 1970: 81).

Another case where a unique script was taken on happened in Georgia. The Abkhaz and the Ossetic languages are spoken in Georgia and were both originally written in the Cyrillic alphabet. In the course of Russian Latinization movement they changed to Latin. Between 1945 and 1954 however, both languages were forced to change to the Georgian script (Comrie 1996: 782). Georgia was always fighting to keep its linguistic uniqueness within the Soviet Union and never wanted to give up its Georgian script. The minorities in the country objected to that, and even wanted to split away from Georgia and become part of Russia. Today, both of these languages are once again written in Cyrillic (Collins 2005: 30, 31).

b. From a Dominant Script to an Invention

Another very rare option to choose is the invention of a new script after a language has already been written in a dominant script. Both categories VI.7.a. and VI.7.b. are not very common. The reason for this is that most languages employ dominant scripts; some (maybe a few dozen) unique

scripts exist, but – since that is what makes them unique – they are used only by one language and many of them have already died out. Among the dominant category, there are also about a few dozen scripts which are weakly dominant and which are also only used by a few languages. This overall tendency to use a dominant script rather than a unique or weakly dominant one is caused to some degree by the unwillingness to invent a new one. And invention out of a dominant script situation is especially rare.

Among the examples I have found is the one that came about out of an additive digraphic situation, namely the Ol Chiki script invented for the language Santhali (see appendix script no. 28). Originally this language, spoken in four different Indian states, was written with four different scripts, namely Bengali, Oriya, Devanagari and Roman. Due to the complications that this situation caused a new script was developed, called Ol Chiki, a distinctive Santhali script developed by a Santhali native scholar, Pandit Raghunath Murmu, which was used in order to ease the situation of additive digraphia. In terms of the symbols it uses, it combines various features from Hindi, Bengali and even Roman. This example shows how an additive digraphic situation can lead a community to even take such extreme steps as inventing a script. However, one has to say that it is not unusual for this to happen in Southeast Asia, since languages are seen to have full status only if they have their own script (Coulmas 1989: 240; Zide 1996: 612; Singh 2001; Coulmas 2003: 228). Although chances for its acceptance seemed weak, Ol Chiki is now quite widespread and accepted and also officially recognized (Zide 1996: 615).

As Jensen (1970: 437) mentions, the Armenian language was written in the beginning of the 5th century AD (in some districts of Armenia) with Greek letters and in other districts with the Assyrian ones (Sassanid-Persian letters). There were also attempts made to invent a Greek-based alphabet, but they did not succeed. Only when Mesrop, the first bishop of Armenia, invented a new script for the language in the 5th century AD, did the attempt succeed to give Armenian its own alphabet (see appendix script no. 29).

c. From a Dominant Script to Another Dominant Script (with or without Modification)

This is undoubtedly the most common option in the history of writing. Dominant scripts are very appealing and can be used not only for motive under V.5., belonging to a group, or V.4., westernization, but also for all kinds of other reasons. An interesting case is that of Azerbaijani, a Turkic language very similar to Turkish. After writing with the Arabic alphabet for centuries, the Roman alphabet was introduced without much effort in 1924. A year later a unified Turkish alphabet was adopted which was supposed to be used by many Turkic languages of the USSR. This Unified Turkic alphabet was very similar to the one that was adopted for Turkish in 1928. Unified Turkic was introduced until 1930 for the languages Kazakh, Uzbek, Turkmen, Karakalpak, Kirghiz and Uyghur. But that sense of unity was not desired by the USSR. Pan-Turkism was considered dangerous by the Soviets (Henze 1977: 376, 377). From 1937 onwards the Russians put forward the efforts for a Cyrillization movement in order to make it easier for people to learn Russian and also to make it easier to accept Russian loanwords into their languages. In this reform the USSR was careful not to make the different Cyrillic orthographies for the Turkic languages similar to one another (Henze 1977: 380-382). Also, orthography was used to highlight dialect differences between them in order to keep them apart (Henze 1977: 411). Examples like this show how scripts can become a tool for all kinds of different political goals. After the fall of the Iron Curtain, when Azerbaijan was free to choose its script again, they opted for the Roman one again in 1991 (Haarmann 2004: 111).

The Romanian language abandoned the Cyrillic alphabet officially in 1868 (Glück 1987: 114) The Romanian language is very similar to the Moldavian one, but Moldovian has traditionally been written in the Cyrillic script. Romania invaded Moldova in 1918 in order to unite it with the Romanian state, but Moldova still held on to its Cyrillic script. The military occupation of Moldova by Romania was never fully recognized by Russia. In 1924 the Soviets reclaimed part of the terroritory and this part of Moldova changed to the Roman alphabet. In 1930 it was changed back to Cyrillic again in order to express distance from Romania. In the course of the Russian Latinization movement which was promoted in the 1920s, Moldova changed its alphabet back to Roman again

in 1933. In 1940 the Russians annexed all of Moldova and the alphabet changed again in 1941 – back to Cyrillic (King C. 1994: 347-349). In this complex connection of script change and politics, we also find an example of script maintenance: Transdnistria, an area of Moldova east of the Dniestr River which seeks independence and whose inhabitants don't identify as either Russians nor Moldavians (Collins 2005: 29). After the fall of Communism in 1989 Moldavia changed back to the Roman script (King C. 1994: 349, 350) – again – but the people of Transdnistria were not happy with this decision (King C. 1994: 358). Afraid of becoming part of a greater Romania, the Transdnistria people stuck to Cyrillic, for which they even sought Russian military assistance in 1992 (King C. 1994: 360). So far the issue stays unresolved until today (Collin 2005: 29).

In Turkey of the 1920s, during a time of cultural and political reforms, the nationalistic leader Kemal Atatürk was headed for Westernization. He wanted to get rid of Persian and Arabic words in Turkish and to modernize archaic orthography. With this language simplification process, he wanted to rid the language of foreign influences and also make the language more modern, which would go hand in hand with a secularization of the state. On the other hand, however, breaking away from Islam and from the Arabic alphabet with which Turkish was written was not an easy task (Doğançay-Aktuna 1995: 222; Gilson 1986; Coulmas 1989: 243, 244). Before the reform of 1928, literacy was low and there was not much of a written tradition in Turkish. This is one of the reasons which Coulmas (1989: 243, 244) cites for the reform's success. Also, attitudes towards the old orthography played a role in people's perceptions of the reform. Writing Turkish in the Roman alphabet was presented by the government as finally reaching the most suitable alphabet for Turkish which would make the language more beautiful. It is true that the Arabic alphabet did not fit the language very well (Coulmas 1989: 243, 244; Doğançay-Aktuna 1995: 242). This reform movement which is tied to Turkish nationalism has its roots in the socio-political situation of the Ottoman Empire in the 19th century. After the collapse of the empire in 1918 and the establishment of the New Republic in Turkey came the implementation of what was already discussed in the society and in the media: ridding itself of foreign words and influences in the society as a whole. Even more than being an instance of westernization, we can see in this movement the desire to

establish a strong and unique Turkish identity and to modernize the country (Doğançay-Aktuna 1995: 224-226).

Vietnamese changed from the Chinese character writing system called chữ nôm to the Latin based system called quốc ngữ (which means "national language"). The new Roman system for Vietnamese includes a great number of diacritics (Hannas 1997: 73; Haarmann 2004: 54, 55). They are displayed in Fig. 10 (Haarmann 2004: 54):

falling tone	à	ằ	ầ	è	ề	ì	ò	ồ	ờ	ù	ừ	ỳ
rising tone	á	ắ	ấ	é	ế	í	ó	ố	ớ	ú	ứ	ý
low tone	ạ	ặ	ậ	ẹ	ệ	ị	ọ	ộ	ợ	ụ	ự	ỵ
falling-rising tone	ả	ẳ	ẩ	ẻ	ể	ỉ	ỏ	ổ	ở	ủ	ử	ỷ
continuously rising tone	ã	ẵ	ẫ	ẽ	ễ	ĩ	õ	ỗ	ỡ	ũ	ữ	ỹ

Fig. 10 - Diacritics in Vietnamese (Haarmann 2004: 54)

The Chinese occupation of Vietnam lasted until about the year 1000 but the influence on the Vietnamese language didn't cease thereafter. The Chinese language as well as the culture continued to influence the country heavily, and the Chinese language was still used by the elite. Chinese character writing was in place for the Vietnamese language from about the year 1000 until the 20th century (Hannas 1997: 78). When the French colonialists annexed Vietnam's three southern provinces in 1862, this gave rise to writing in the Roman script. For the French this was seen as a perfect way to spread the knowledge of the French language. Over time, the Chinese language lost more and more ground and Roman even became associated with the liberation of the former colonizers. Even without a unified language planning effort, the Roman script had been used for many publications and media by the 1930s. When the French left Vietnam in 1954, Chinese character writing was no longer used and the public was quite satisfied with the elimination of the characters (Hannas 1997: 85-87). Before quốc ngữ writing was introduced, there were already other Romanizations for Vietnamese used sporadically and therefore the Roman script had lost its

negative connotation of being the script of the colonizers (Hannas 1997: 89, 90). The quốc ngữ alphabet is now deeply anchored in Vietnamese society and a strong part of the Vietnamese identity (Haarmann 2004: 100). Writing Vietnamese in Chinese lettering was always problematic since it could not depict the language adequately. It was also too closely linked with the strong influence that China had on Vietnam on all levels over centuries and which people wanted to rid themselves of. Despite the fact that the French had fears of a spread of Vietnamese nationalism, they also promoted Roman literacy since they did not want to further the influence of the rival China. Another reason for the success of the reform is the fact that only a small segment of the population was literate before, which made a script change easy (Hannas 1997: 89, 90).

We have now examined some of the most important cases of diachronic digraphia in the history of writing. The remaining three categories involve script death. This is logical since, in these cases, the switch is made from a unique script to another one, and naturally, if a unique script is abandoned, it will die.

VI. 7. B. Script Change plus Script Death (Diachronic Digraphia plus Script Death)

a. From a Unique Script to a Dominant Script (with or without Modification)

The example I am looking at here can be considered as an instance of failed script reform. For the A-Hmao community in Yunnan province, China, the Pollard system (see appendix script no. 10) was devised in the beginning of the 20th century by the missionary Samuel Pollard. With this new script he created a system which the local communities were eager to take on (Enwall 2001: 98). The Chinese authorities however did not like the ties these communities had with the Church and found the system also linguistically inadequate. They saw a danger in the ties the Miao churches had to foreign churches as well. Therefore the Pollard system had to be completely abandoned. What Zhou calls a "reform" of the Pollard system was rather a complete change to the Roman alphabet. A Roman script with heavily modified symbol inventory was implemented in 1957; one year later already it was reformed again to bring it in line with the newly implemented Pinyin system for Putonghua (Zhou 2003: 317, 318). This new form of the Pollard system could not hold, however, and the original Pollard script kept on increasing its prestige. In the 1980s it was

standardized since the government wanted to bring it under its control and in 1984 it gained a preliminary experimental status as a minority language writing system. It is used especially in areas with a Christian stronghold. Non-Christians still use the reformed Pollard script system, of which Zhou thinks that it does not have much possibility to remain in place since it is not connected to religion and the original and new (Pinyin-oriented) Pollard systems have a stronger position. The original Pollard script is very prestigious, but the reformed Pollard system lacks support from the community. Also, the regular Pinyin system for Putonghua already exists as a Roman alternative. The Roman script could never be so successfully linked to the Miao language as Pinyin became associated with Putonghua (Zhou 2003: 320-322; Enwall 2001: 103). Zhou and Enwall consider the change to Roman to have failed, one of the reasons for this being that there is a large Christian community among the A-Hmao. These people are very proud of their unique Pollard system; they consider it as something belonging to their ethnic and national culture, and they rejected Roman since it seemed too foreign to them (Enwall 2001: 104-106).

Ogham was the first writing system used for the Irish language (see appendix script no. 30). It was in use mainly from the 5th to 7th century AD (Jensen 1970: 579; McManus 1996b: 340). While writing in Ogham was inspired by the Latin alphabet, the similarities are nevertheless few in number. The Irish took the principle of alphabetic writing from the Romans. There were many Latin influences in Ireland due to the advent of Christianity in the 5th century AD. Ogham was still known in the Middle Ages but was no longer a full, functional script (McManus 1996b: 342). Around 650 AD the Latin alphabet began replacing Ogham as the script for Irish (Haarmann 2004: 116, 117).

It is not only an already unique script which can die, but also scripts which have once been somewhat dominant, such as the Runes, can eventually die out. This occurs with the steady decrease of script dominance and with the shift to more appealing scripts which can ultimately lead to a dominant script becoming unique again. Haarmann reports that Runes (see appendix script no. 31) where still used for Old Gutnic, spoken in Gotland in Denmark, up to the 16th century AD (Haarmann 2004: 118) before they died out for good. In the latest phase of the Runes, when a transformation from paganism to Christianity was taking place (first in continental Europe and

England, later also in Scandinavia), even Christian texts could be found in Runes. This usage was only temporary, however, and from the 10th until the 13th century the Roman alphabet became gradually more dominant as the Runes were abandoned (Haarmann 1991: 465; see also Elliott 1971: 28, 29). This instance of diachronic digraphia appears to have involved a rather dragged out script shift at least in some cases. Elliott remarks that the Runes lost their appeal over time, and that the Church knew that mere conversion to the Christian faith was not sufficient in some places to give up Runic writing, which was, of course, also linked very closely to their ancient sagas and stories, and that the Church even accepted Runes to some degree (Elliott 1971: 29, 30, 41). The exact shift from Runes to the Roman alphabet differed from place to place, and despite a certain degree of mingling between Runes and Roman, detailed accounts are given by neither Haarmann (1991) nor Elliott (1971) about the exact circumstance of the abandonment of the Runes. About what eventually led to them becoming less desired than Roman, Elliott merely writes:

> "It is clear that once the true character of runic lore had ceased to be a vital force among the Germanic peoples, the drawbacks of runic writing was as a purely practical medium prevented any effective competition with Roman-derived minuscles as a suitable everyday script." (Elliott 1971: 75)

Another example of VI.7.B.a. can be found in Jensen (1970): he mentions the Balti script (see appendix script no. 32), which he calls a "very puzzling script". It was used by the people called Balti or Bhotia in Baltistan (Western Tibet). It only came into being after the area had been converted to Islam in 1400, which might explain its similarities to Arabic. Apart from Arabic similarities it also shows similarities to some Indian scripts. The Balti script was later replaced by the Arabic alphabet but Jensen doesn't give any specific reasons for this (Jensen 1970: 335).

b. From a Unique Script to an Invention

This is one of the rarest cases of all discussed in this framework. If there is already a unique script in place, it is very unlikely that there will be a switch made to a completely new script by invention. I am not sure about the exact reasons for this, but it seems that two inventions, so close after each other, do not seem to be of much use. Regardless of how the first unique script used by a language came about (usually through invention, but also possibly through weakening of script

dominance), the fact is as soon as a script is unique, i.e. used only by this one language, there seems little motivation left to actively engage in script creation – again.

Coptic (see appendix script no. 27) constitutes a break in traditional Egyptian writing and, of course, the Egyptian language has also changed over the span of 2000 years of its existence. It was used from the 4th to the 10th century AD when Christianity was introduced in Egypt and when Greek became the language of the administration and the Greek influences on society increased. Currently it is still in limited use for the Coptic Orthodox Church. Although it shows great similarities to the Greek alphabet, it also includes some symbols from the previous script used for Egyptian, Demotic (Jensen 1970: 487-489; Ritner 1996b: 287; Houston, Baines and Cooper 2003: 443, 468).

Another example is that of the Dhivehi language, spoken by 230,000 people on the Maldives Island. Dhivehi was written with the Akuru script (also called Dives or Divehi script) until the 17th century AD. Gair and Cain report that at this point the Gabuli Tāna script was introduced (also called Thaana or Tāna; see appendix script no. 33), but they do not give any indications as to why this occurred (Gair & Cain 1996: 564-565).

c. From a Unique Script to Another Unique Script (with or without Modification)

Even rarer than the previous option is the decision to change from one unique script to another unique one. I could only find one example of this in the literature. While invention can maybe still be explained by a change of, for example, political influence on a society which might lead to a new script creation, the adoption of a unique one – after a unique one was already in use – is highly improbable. Cases of category VI.7.c. may at first sight actually be seen as occurring more likely than cases of category VI.7.b., since socio-political change or contact to a new community for all kinds of reasons might appear to provide sufficient motives for taking on a unique script, i.e. a script which is already in use in another group. However, due to the fact that cases of unique script usage are already quite rare to be begin with, cases of change where two unique scripts are involved are then even rarer and practically never appear in the history of writing.

The Orkhon Runes (also called Runiform alphabet; see appendix script no. 34) is a script stemming from the 8th century AD and was found in the Orkhon River valley in Mongolia. It was initially used for the Ancient Turkic language. Kara reports that it was later used in the early Uyghur Empire (Kara 1996: 536-537). Shortly after employing the Turkic runes the Uyghurs adopted the Sogdian script (see appendix script no. 35) in the 8th century AD, which is itself a reduced version of the Aramaic script. The Sogdian script was originally written horizontally but the Uyghurs modified its direction and wrote it vertically (Kara 1996: 539). Haarmann (1991: 508) suggests that the vertical writing direction came about through Nestorian influence. The Nestorian script is a (Eastern) variant of the Syriac script used among Nestorian Christians in Iran. According to Haarmann (1991: 304), it was carried by missionaries as far as China. He mentions a Chinese-Syrian [sic] inscription from the 8th century (see appendix script no. 36) which is written vertically. He claims that this type of writing is what has eventually influenced Uyghur writing to change its writing direction. Nevertheless, the exact circumstances are neither given by Haarmann (1991) nor Kara (1996) and it does not become entirely clear what motivates Haarmann to believe why a direct influence from Chinese could not have been the more likely root for such a switch from horizontal to vertical writing.

No more examples could be found. The closest would be the change from the Meroitic script to the Coptic alphabet with the adoption of Christianity in the 6th century AD, but the Meroitic script was previously used by more than one Nubian language, so it cannot really be called unique (Millet 1996: 84).

VI. 8. Script Loss: Losing one's Own Script

After examining some cases of script death that were at the same time instances of script change, we turn – for the last category – now to the possibility of script death without change. Script death is not an extremely popular subject, and it does not get mentioned as often as script change or adoption. There is not one prototypical case of script death, however; and that is why I have divided it up into multiple subcategories. All the conditions considered in category VI.8. – titled *script loss* – entail cases where the languages lose their script completely, never again to be

written. Script loss is not the same as *script death*[13]. While script death merely refers to the dying out of a script, script loss means a break in the relationship between a language and its script: a language loses the bond to its script. This can be the case due to script death, however this does not necessarily involve script death. A language can lose its script under two types of circumstance: either when the language dies out or when a society decides to give up writing altogether. Neither of these circumstances need also entail script death. The term "script death", a parallel to the sociolinguistic term "language death", is used by Unseth (2005: 30). He refers to script death as happening "when no language community continues to use a script". Unseth writes (2005: 30) that similar to language death, script death occurs when a script is used less and less by the community. Domains are lost for the script and, in the end, it is only used by a very small segment of the language community. Domains which scripts are often limited to in the end are ritual and magical domains. While these observations are certainly an accurate description of script death, I do not include the instance of domain diminishing in the script loss category, but see it rather as the natural processes involved in functional digraphia (VI.4.c.). If a (unique) script loses all of its domains and dies out in a speech community where more than one script is present, this would be an instance of subtractive digraphia of the third kind (VI.6.c.), where a script is eliminated which was used before according to certain domain differences. This can be considered as partial script loss, which can also entail script death if the script was unique, but I prefer for reasons of uniformity to refer to cases like this as subtractive digraphia (with potential script death). An alphabet can be abandoned for another one by one language, but it can still be used in many other places in the world. While this undeniably leads to the weakening of the dominance of the script, this does not necessarily go together with script death. Script death only occurs once it has been abandoned by the last language community (i.e. if the script is unique).

[13] We see from the examples in VI.7.B. and VI.8. that neither of them can be considered "pure script death". According the categorization taken in this framework, this kind of script death, i.e. without the presence of any other type of digraphic situation, does not exist.

a. Script Loss with Language Death

In this case the language dies out and with it the script. Of course, script death alone is not as final as language death. In case VI.8.a. as well as VI.8.b. it might be the case (consider for example Latin, Sanskrit or Ancient Greek), that a language loses its functional purposes but is nevertheless still studied and lives on in writing or at least in reading. Some cases of language death are however more final. Even when script death is in fact final, this does not mean that script revival cannot occur, even after the language has already died out completely (Unseth 2005: 31).

i. involving a Unique Script (Script Death plus Language Death)

In final cases of language death where a unique script was used – as in the example of Rongo Rongo – script death occurs. Rapanui, the language of the Easter Islands written in Rongo Rongo (see appendix script no. 37) was still spoken in the 19th century when many islanders were kidnapped by the Peruvians. Over the years the Rapanui were exploited by Peruvian labour gangs and also were decimated by smallpox. Currently, the script is still undeciphered. It died out together with the language (Macri 1996: 183; Houston, Baines, Cooper 2003: 468).

Another script that died out together with the language is the Gothic script (see appendix script no. 38). The exact time of its extinction is not known. The Gothic script is very similar to the Greek alphabet which is considered to be its source. It was created by the Gothic bishop Wulfila in the 4th century AD for the Gothic language, spoken by the East Germanic tribes of the Goths (Ebbinghaus 1996).

ii. involving a Dominant Script (pure Language Death)

Cases where there is no script death but only script loss are the cases where language dies and as a result of this, it loses its dominant script. No script death happens since the script was a dominant one. I will not discuss examples of this here since many examples of mere language death are commonly discussed in sociolinguistic literature.

b. Script Loss without Language Death

In these instances, there is no language death present but an abandonment of the written tradition. For some reason or another literacy dies out for a certain speech community.

i. involving a Unique Script (Script Loss plus Script Death)

If the script used previously has been a unique one, script death will occur. It is not easy to come across instances like this in the literature since they are not really discussed per se. I found some hints of occasions where this might have happened. One case is the Indus script (see appendix script no. 39), which was used by Dravidians of Ancient India. It was in use from about 2600 BC to about 1900 BC (Haarmann 1991: 111). After the loss of the script, which supposedly did not entail language death, there was "scriptural silence" for over 1650 years (from 1900 BC to 250 BC), when the language was written again (Houston, Baines and Cooper 2003: 432; Haarmann 1991: 521). The Ancient Turkic language was written in Orkhon runes for a certain time, of which Haarmann says it was a very short period (about 100 years) (Haarmann 1991: 516). After the period of the Second Turkic Empire (8th and 9th century) however, around 840 most of the Turkic tribes abandoned writing. They only became literate again with the advent of Islam among the Turkic tribes, which of course introduced Arabic writing for many of the Turkic languages (Kara 1996: 536; Vajda: personal communication). Another instance of literacy abandonment might be the fact that Greek was not written for several centuries. This happened after the Cretan syllabic writing in Linear B (see appendix script no. 40) was abandoned around the year 1375 BC and when in 1100 BC the Mycenean civilization was destroyed on the Greek mainland (Houston, Baines, Cooper 2003: 468; Haarmann 1991: 243-258).

ii. involving a Dominant Script (pure Script Loss)

The same thing can also happen if the language has been associated with a dominant script. Here also we cannot speak of script death but only of script loss. Language death as well as script death are not present, the language lives on orally and the script with other languages using it. Cases like this are not easy to come by, but they do exist (Aikhenvald: personal communication). Aikhenvald (2002: 14) reports the case of the Tucano language. It is a language spoken in northern Brazil in the Vaupés river basin. It counts over 2600 speakers in Brazil (Gordon 2005: 233). The majority of the population in this area is Catholic and schooling has been introduced by the Salesian missionaries, which led to most people becoming literate in Portuguese. Aikhenvald mentions that

the Roman script was introduced for the Tucano language via more than one proposal for literacy. She reports that at least one of them has been rejected by Tucano speakers. People have found writing in Tucano too difficult and complicated and therefore chose not to write in Tucano but rather only write in Portuguese. She also points out however, that to a very limited degree (e.g. for church materials and mission work) writing in Tucano does take place, but to this very limited extent writing is carried out by the Salesians (Aikhenvald 2002: 21; Aikhenvald: personal communication). A similar situation can apparently be said to exist also for the Baniwa/Kurripako language which is spoken in the same area as well as for Manambu in northwestern Papua New Guinea (Aikhenvald: personal communication).

Furthermore, similar cases are some of the Siberian minority languages (Nivkh, Ket, Yukaghir, Shor, etc.). In the 1930s Latin-based alphabets were developed for several languages of the Russian North and their grammars were codified. Some Turkic and other non-Russian politicians considered the Latin alphabet to be well suited for these languages, since it meant progress and modernization and at the same time provided a certain distance from Russian culture. A Unified Northern Alphabet was finalized around 1930. However, the implementation of these literacy efforts did not run smoothly. To distribute learning materials and to provide teachers who actually spoke these languages were sometimes unachievable tasks, as politics and bureaucracy got in the way of language planning. Also, many people were not so interested in becoming literate in their own languages and preferred Russian for this purpose. This is why, by 1940, these alphabets devised for these languages were given up and writing was abandoned. Vajda mentions, however, that some of these languages made new efforts in the 1980s to devise new literacies (Slezkine 1994: 242-245; Vajda: personal communication).

VII. Problems and Possible Inconsistencies with this Framework

The view presented in this paper does not claim to be a new model or a theory. It merely seeks to approach certain phenomena of writing from a new perspective. It seeks to present a new categorization for old phenomena which have been already discussed in the literature but which

have not yet been united systematically in a common framework. In doing so, it is expected that there will be the possibility to easily compare patterns of dependencies between speech communities, literacy choices and their underlying motives as well as between communities, languages and scripts. There are still some aspects of this framework which might be regarded as inconsistent. Since these cannot be fully resolved in the scope of this work, I would nevertheless like to point them out.

It might be the case that some assumed categories actually do not exist as such in reality. Script change could itself be such an instance of an artificial category. As the framework is presented now, there is the possibility of actual change (category VI.7.) on the one hand and addition (category VI.4.) plus subtraction (category VI.6.) which could also lead to change on the other hand. It could be that cases of change would actually predominantly take the addition plus subtraction route rather than fall under the "pure" change category, however it is impossible at this point to make any evaluation about this matter. I believe, however, that change is more often an instance of previous addition and later subtraction than assumed, although script change is not traditionally discussed like this. Unfortunately, the examples presented in this paper could not be examined in greater detail, which might result in some category changes if more scrutiny were applied. The purpose of this paper however, is not to gain insights where specific examples stand in terms of a category of this framework, but to rather present a new theoretical discussion on the subject overall. Undoubtedly, further investigation is necessary to find out what kind of categories known phenomena – such as change – go through and which categories are possibly too artificial. While addition does not necessarily need to be linked to script change, only further research can determine to what degree script addition is linked to change and what is the most common pattern in script change situations. Another literacy option which could be labelled too artificial is category VI.2.b. – adoption of a dominant script. The question arises if there is actually an adoption of any scripts without any form of modification to make them fit a language. If this is not the case, adoption plus modification (VI.2.c.) would become the default option for first time script adoption. The same is of course true for category VI.7. Due to space restrictions I have decided not to comment specifically

on cases of adoption plus modification or adoption without modification. But in category VI.7. one would also need to establish how much modification (or non-modification) actually plays a role.

What this discussion about digraphic situations could not account for was the theoretical concept of script itself. What a script really is and where the boundaries lie in terms of styles and to other scripts would need to be addressed. Questions such as to what degree one can speak of script invention, as opposed to modification, are difficult to answer. In this MRP the distinction has been made between invention of a script and the modification of a script. In reality this distinction is less clear than it seems at first sight. Is the creation of the Greek script a modification of the Phoenician alphabet or a separate invention? Is the Roman alphabet just a modification of the Greek one or should it be regarded as its own script which arose by establishing a new set of characters under the heavy influence of the Greek ones? To what degree is Thai an invention or just a derivation of the Brāhmī script? All these important questions are difficult to answer and could not be addressed in this work, but they could possibly be accounted for by taking into consideration some of the issues raised in this framework. The Greek development into Latin for example could be seen as first time adoption plus modification, initially possibly as VI.2.a. and later as category VI.2.c. As these new modified scripts also become adapted by other languages and more modifications were carried out, one would eventually arrive at a similar looking but distinct script. What we have is the Greek script at one end of the pole and the Latin script at the other end, with Latin being the final product of several steps taken which entailed modification. And for each of these modificational strategies, not only the linguistic reasons but also the specific social reasons would need to be taken into account. Despite the fact that script modification has clear linguistic purposes, modification always also entails some sort of extra-linguistic motivation which cannot be dismissed.

It is important that one refrains from considering scripts which employ similar symbols as being essentially the same as another script. Even if scripts look the same, what makes them an independent system is that symbols are assigned different sound values in different systems. Although Latin symbols may look the same or very similar to some Cherokee symbols, Sequoyah makes very different use of these symbols than the Roman alphabet does. Even if there are

symbolic similarities, if the function or the pronunciation of these symbols differs too much from the original system, one should speak of two scripts. Therefore I cannot agree with Hansell (2002: 166), who considers Kanji and Kana to belong to the same script. He also raises the question, when the Roman alphabet for example is incorporated into a logographic system in a creative way (namely in a non-alphabetic way), of how and if one can distinguish when the Roman alphabet ceases to be an alphabet in these instances. While the symbols are still the same, the alphabetic functions are lost (Hansell 2002: 169). These are important questions to raise also in the context of this framework, since this framework does rely on treating scripts as something which can be recognized objectively. Much care is needed in this respect not to fall into traps regarding the sticky issues of script evolution and script classifications.

There are also some problems concerning the proposed motives of this framework, since in some cases two or more motives could actually entail each other. This could be the case if, for example, westernization, modernization and preservation of the status quo were to coincide. Keeping on the track of a modernizing path of progress, for example, could be seen as being a kind of preservation. Furthermore, creating a unique identity does not necessarily mean creating a new one, but it can also refer to strengthening the power and status of a group by establishing oneself further as a political or social entity.

Furthermore, the difference between full scale literacies of advanced societies or the literacy which is only practised by elites is an aspect which has not received much attention in this work. These two instances belong to two very different kinds of societies and, until recently, the literacy rate was low in most societies (Cook-Gumperz & Gumperz 1981: 93). But what the perspective on writing in this paper is more concerned with is not so much the individual aspects, but rather seeing literacy as a symptom of underlying and competing tensions, ideological conflicts and power struggles in a society. While these two kinds of literacies are undoubtedly very different – especially in terms of who is able to make decisions about writing – both instances entail choice. Therefore, as long as one does consider the different conditions which are present, the literacy rate

being very high or very low, this framework can still provide an interesting perspective for both of these cases. In both instances, there is still choice – a choice which is never made in a vacuum.

The term "dominant script" is somewhat of a problematic term as well. If a script is locally dominant and is used by maybe half a dozen languages and dialects, one can maybe speak of low dominance but clearly this script cannot compete with really dominant scripts like Arabic or Cyrillic. Also, the question of how dominant a script actually is depends on how one classifies a speech variety as being either a language or dialect, which is of course a very controversial issue. Nevertheless, although another category like "weakly dominant" script could be taken on, I prefer that a more basic distinction between dominant and unique script be maintained for the moment.

VIII. Conclusion

After exploring the various options for literacy together with some examples, we see now how ample the possibilities are of how a language can be linked to a script and how diverse the motivations are for choosing a specific type of "link". What should become very clear is that digraphia is a much more complex matter than the common definition "two scripts used for one language" would ever suggest. It has the potential to be much more and can become a useful lens through which one can not only look at synchronic or diachronic digraphic situations but a whole variety of other related situations. To view digraphia in this way essentially takes the "di-" out of digraphia. This paper has tried to shift the concept from a view where there is a 2:1 relation (scripts to language) to a notion where digraphia becomes a flexible phenomenon with a potential to explain *all possible* relations between scripts and languages. This all encompassing view entails describing more "unusual" script-language relationships as well as very ordinary ones while seeing all such relationships as being as types of digraphias. Tab. 2 lists all of the categories discussed in this work

including their examples. It is clear that these examples only constitute a small selection and that for most of these categories there are many more examples which could have been chosen instead[14].

Category Name	**Examples mentioned in this MRP**
Staying in Orality	Pirahã
	Celtic
	Etoro
1st time Script Adoption: choosing unique	Mingrelian
	Mongolian
1st time Script Adoption: choosing dominant	numerous examples
	(only a few mentioned here)
1st time Script Adoption: choosing dominant with some modification	(Aymara)
	numerous examples (not discussed)
1st time Script Adoption: invention	Cherokee
	Cree
	Komi
Script Maintenance	Kyrgyz
	Chinese
	Georgian
Internal Digraphia	various examples
Synchronic Digraphia	Hindi/Urdu
	Serbian/Croation
	Kurdish
Structural Digraphia	Japanese
	Korean
	Taiwanese
	Uyghur
Functional Digraphia	Egyptian
	Mongolian
	Hausa
Modificational Digraphia	Dutch
	Dai (Dehong)
	Chinese
Subtractive Digraphia of the 1st kind	Albanian
	Serbian/Croatian
Subtractive Digraphia of the 2nd kind	Korean
Subtractive Digraphia of the 3rd kind	Croatian
Diachronic Digraphia: dominant to unique	Nubian languages
	Abkhaz, Ossetian
Diachronic Digraphia: dominant to invention	Santhali
	Armenian

[14] Categories which list only one example on Tab. 2 are the ones which do not occur as frequently, however, the fact that only one example could be found during the research for this MRP does imply that the example cited is the only one in existence.

Diachronic Digraphia: dominant to dominant	Azerbaijani
	Vietnamese
	Moldavian
	Turkish
Diachronic Digraphia plus Script Death: unique to dominant	Ogham
	Balti
	Germanic
Diachronic Digraphia plus Script Death: unique to invention	Egyptian
	Dhivehi
Diachronic Digraphia plus Script Death: unique to unique	Uyghur
Script Death with Language Death	Rongorongo
	Gothic
Language Death	numerous examples (not discussed)
Script Loss plus Script Death	language of Ancient India
	Greek
Script Loss	Tucano
	various languages in Sibiria

Tab. 2 – List of categories and examples mentioned in this paper

The breadth and the variety of phenomena incorporated into this framework shows that a study of digraphic situations can be a very exciting and challenging field for further academic inquiry. Since this certain dynamic digraphic force which is constantly at work - and which is not an end in itself but rather a consequence of various social, cultural and political factors - it is crucial that analysis is guided by linguistics as well as by sociology, anthropology, ethnology, political science, history and similar fields in order to establish the meaning of a script or a choice about scripts in a given speech community (see also Glück on this matter 1987:113, 114). Coulmas (2003: 236) sees a script as an "instrument of social engineering and forging political allegiance" and also Dale (1980) comments on the social value of scripts in a similar way:

> "By examining which script is chosen by a speech community, we can tell something of the cultural currents of the time. Cases of digraphia are particularly interesting from this point of view in that they indicate situations of competition between forces, no one of which has been able to prevail against the others." (Dale 1980: 13)

The definition of digraphia which I have given in chapter II. sees digraphia less as a set of specific categories which can be opted for by a community but rather as a force which is always at work. This means that languages, being written or not, always have a certain relation to literacy. While languages are generally in a state where they are in a relationship with literacy the form this relationship takes (i.e. the type of literacy option that is chosen) is influenced by motivations and goals of a speech community.

Considering this view on the subject, "digraphia" does not prove to be the most suitable term, since it implies the usage of two scripts as in synchronic digraphia. Seeing beyond this notion of synchronic digraphia is not easy while continuing to use to this term, because the word itself implies too much its original usage. This makes it such that the term itself does not lend itself very well to the view expressed in this paper and especially in the definition. I therefore want to propose the term *scriptality* instead[15]. This term seems to fit much better to the notion of script-language relationships as something which can, in a very flexible way, encompass all kinds of phenomena referred to here as "options of literacy". Furthermore, talking about the kind of scriptality that a language has also parallels the notion of *orality*.

I want to conclude my work with a quote from Gaur (2000), which touches on one of the most important aspects of this kind of view on writing, namely the act of following a language throughout its history from birth to death and watching and analysing the kind of scriptality phases it goes through in its literacy history:

> "We have as such not one history of writing but various histories of different forms of writing which came into existence or were invented or evolved […], moving towards their own (not one universal), purpose-determined goal." (Gaur 2000: 6)

[15] I have not encountered the term as such in the literature, however, have taken it from Singh (2001) who refers in the title of his 2001 article to "multiscriptality in South Asia".

References

Aikhenvald, A. Y. (2002). *Language contact in Amazonia*. Oxford: Oxford University Press.

Aikhenvald, A. Y. (2006). *Personal email communication*. July 2006.

Angermeyer, P. S. (2005). Spelling bilingualism: Script choice in Russian American classified ads and signage. *Language in Society*, 34, pp. 493-531.

Augst, G. (1996). Germany: Script and politics. In P. T. Daniels & W. Bright (Eds.), *The world's writing systems* (pp. 765-768). New York: Oxford University Press.

Backhaus, P. (2005). Signs of multilingualism in Tokyo – a diachronic look at the linguistic landscape. *International Journal of the Sociology of Language*, 175/176, pp. 103-121.

Bellamy, J. A. (1989). The Arabic alphabet. In W. M. Senner (Ed.), *The origins of writing* (pp. 91-102). Lincoln, NB: University of Nebraska Press.

Bennett, J. A. & Berry, J. W. (1991). Cree literacy in the syllabic script. In D. R. Olson & N. Torrance (Eds.), *Literacy and orality* (pp. 90-104). Cambridge: Cambridge University Press.

Berry, J. (1977). 'The making of alphabets' revisited. In J. A. Fishman (Ed.), *Advances in the creation and revision of writing systems* (pp. 3-16). The Hague: Mouton.

Bowdre Jr., P. H. (1982). Eye dialect as a problem in graphics. *Visible Language*, 16(2), pp. 177-183.

Campbell, G. L. (1997). *Handbook of scripts and alphabets*. London: Routledge.

Caodaobateer (2004). The use and development of Mongol and its writing systems in China. In M. Zhou (Ed.), *Language policy in the People's Republic of China: Theory and practice since 1949* (pp. 289-302). Norwell, MA: Kluwer Academic Publishers.

Cheung, Y.-S. (1992). The form and meaning of digraphia: The case of Chinese. In K. Bolton & H. Kwok (Eds*.), Sociolinguistics today: International perspectives* (pp. 207-217). London: Routledge.

Chiang, W. W. (1995). *"We two know the script; we have become good friends": Linguistic and social aspects of the women's script literacy in southern Hunan, China*. Lanham, ML: University Press of America.

Collin, R. O. (2005). *Revolutionary scripts: The politics of writing systems.* Accessed online at Omniglot on April 5, 2006. http://www.omniglot.com/language/articles/index

Comrie, B. (1996). Script reform in and after the Soviet Union. In P. T. Daniels & W. Bright (Eds.), *The world's writing systems* (pp. 781-784). New York: Oxford University Press.

Cook-Gumperz, J. & Gumperz, J. J. (1981). From oral to written culture: The transition to literacy. In M. Farr Whiteman (Ed.), *Writing: The nature, development, and teaching of written communication. Variation in writing: Functional and linguistic-cultural differences* (1st vol., pp. 89-109). Hillsdale, NJ: Lawrence Erlbaum.

Coulmas, F. (1989). *The writing systems of the world*. Oxford: Blackwell.

Coulmas, F. (2003). *Writing systems: An introduction to their linguistic analysis*. Cambridge: Cambridge University Press.

Cubberley, P. (1996). The Slavic alphabets. In P. T. Daniels & W. Bright (Eds.), *The world's writing systems* (pp. 346-355). New York: Oxford University Press.

Dale, I. R. H. (1980). Digraphia. *International Journal of the Sociology of Language*, 26, pp. 5-13.

Daniels, P. T. (1996). Shorthand. In P. T. Daniels & W. Bright (Eds.), *The world's writing systems* (pp. 807-820). New York: Oxford University Press.

DeFrancis, J. (1984). Digraphia. *Word*, 35(1), pp. 59-66.

DeFrancis, J. (1989). *Visible speech: The diverse oneness of writing systems*. Honolulu: University of Hawaii Press.

Dew, J. E. (1996). Advances in computerization of Chinese. *Journal of the Chinese Language Teachers Association*, 31(3), pp. 15-32.

Dixon, R. M. W. (1997). *The rise and fall of languages*. Cambridge: Cambridge University Press.

Doğançay-Aktuna, S. (1995). An evaluation of the Turkish language reform after 60 years.

Language Problems & Language Planning, 19(3), pp. 221-249.

Ebbinghaus, E. (1996). The Gothic alphabet. In P. T. Daniels & W. Bright (Eds.), *The world's writing systems* (pp. 290-296). New York: Oxford University Press.

Elliott, R. W. V. (1971). *Runes: An introduction*. Manchester: Manchester University Press.

Enwall, J. (2001). Di- and trigraphia among the A-Hmao in Yunnan province, China. *International Journal of the Sociology of Language*, 150, pp. 43-59.

Fasold, R. (1984). *The sociolinguistics of society*. New York: Blackwell.

Feldman, L. B. & Barac-Cikoja, D. (1996). Serbo-Croatian: A biscriptal language. In P. T. Daniels & W. Bright (Eds.), *The world's writing systems* (pp. 769-772). New York: Oxford University Press.

Ferguson, C. (1959). Diglossia. *Word*, 15, pp. 325-340.

Ferguson, C. (1968). St. Stefan of Perm and applied linguistics. In J. A. Fishman, C. A. Ferguson & J. Das Gupta (Eds.), *Language problems of developing nations* (pp. 253-265). New York: John Wiley & Sons.

Fischer, H. G. (1989). The origin of Egyptian hieroglyphs. In W. M. Senner (Ed.), *The origins of writing* (pp. 59-76). Lincoln, NB: University of Nebraska Press.

Fishman, J. A. (Ed.). (1977). *Advances in the creation and revision of writing systems*. The Hague: Mouton.

Fishman, J. A. (1988). Ethnocultural issues in the creation, substitution, and revision of writing systems. In B. A. Rafoth & D. L. Rubin (Eds.), *The social construction of written communication* (pp. 273-286). Norwood, NJ: Ablex Publishing.

Fishman, J. A. (2001). Digraphia maintainance and loss among Eastern European Jews: intertextual and interlingual print conventions in Ashkenazic linguistic culture since 1800. *International Journal of the Sociology of Language*, 150, pp. 27-41.

Frank, H. (2001). Identity and script variation: Japanese lesbian and housewife letters to the editor. In K. Campbell-Kibler, R. J. Podesva, S. J. Roberts & A. Wong (Eds.), *Language and sexuality: Contesting meaning in theory and practice* (pp. 207-224). Stanford, CA: Center for the Study of Language and Information.

Gair, J. W. & Cain, B. D. (1996). Dhivehi writing. In P. T. Daniels & W. Bright (Eds.), *The world's writing systems* (pp. 564-568). New York: Oxford University Press.

Gaur, A. (1984). *A history of writing*. London: The British Library.

Gaur, A. (2000). *Literacy and the politics of writing*. Bristol, UK: Intellect.

Geerts, G., van den Broeck, J. & Verdoodt, A. (1977). Successes and failures in Dutch spelling reform. In J. A. Fishman (Ed.), *Advances in the creation and revision of writing systems* (pp. 179-245). The Hague: Mouton.

Gelb, I. J. (1963). *A study of writing* (2nd revised ed.). Chicago: The University of Chicago Press.

Giles, H., Bourhis, R. Y. & Taylor, D. M. (1977). Towards a theory of language in ethnic group relations. In H. Giles (Ed.), *Language, ethnicity and intergroup relations* (pp. 307-348). London: Academic Press.

Gilson, E. H. (1986). Introduction of new writing systems: The Turkish case. In N. Schweda-Nicholson (Ed.), *Languages in the international perspective. Delaware Symposium 5* (pp. 23-40). Norwood, NJ: Ablex.

Glück, H. (1987). *Schrift und Schriftlichkeit: Eine sprach- und kulturwissenschaftliche Studie.* Stuttgart: J. B. Metzler.

Gordon, R. G. (Ed.). (2005). *Ethnologue: Languages of the world* (15th ed.). Dallas: SIL International.

Gragg, G. B. (1996). Other languages. In P. T. Daniels & W. Bright (Eds.), *The world's writing systems* (pp. 58-71). New York: Oxford University Press.

Green, M. W. (1989). Early Cuneiform. In W. M. Senner (Ed.), *The origins of writing* (pp. 43-57). Lincoln, NB: University of Nebraska Press.

Grivelet, S. (2001a). Introduction. *International Journal of the Sociology of Language*, 150, pp. 1-10.

Grivelet, S. (2001b). Digraphia in Mongolia. *International Journal of the Sociology of Language*, 150, pp. 75-93.

Haarmann, H. (1991). *Universalgeschichte der Schrift*. Frankfurt: Campus.

Haarmann, H. (2004). *Geschichte der Schrift* (2nd ed.). München: C. H. Beck.

Hannas, W. C. (1995). Korea´s attempts to eliminate Chinese characters and the implications for romanizing Chinese. *Language Problems & Language Planning*, 19(3), pp. 250-270.

Hannas, W. C. (1997). *Asia's orthographic dilemma.* Honolulu: University of Hawai'i Press.

Hannas, W. C. (2003). *The writing on the wall: How Asian orthography curbs creativity.* Philadelphia: University of Pennsylvania Press.

Hansell, M. (2002). Functional answers to structural problems in thinking about writing. In M. S. Erbaugh (Ed.), *Difficult characters: Interdisciplinary studies of Chinese and Japanese writing* (pp. 124-176). Columbus, OH: National East Asian Language Resource Center (The Ohio State University)

Harper, K. (1993). Innovation and inspiration – the development of Inuktitut syllabic orthography. *Meta*, 38(1), pp. 18-24.

Harris, R. (1995). *Signs of writing.* London: Routledge.

Henze, P. B. (1977). Politics and alphabets in Inner Asia. In J. A. Fishman (Ed.), *Advances in the creation and revision of writing systems* (pp. 371-420). The Hague: Mouton.

Holisky, D. A. (1996). The Georgian alphabet. In P. T. Daniels & W. Bright (Eds.), *The world's writing systems* (pp. 364-369). New York: Oxford University Press.

Houston, S., Baines, J. & Cooper, J. (2003). Last writing: Script obsolescence in Egypt, Mesopotamia, and Mesoamerica. *Comparative Studies in Society and History*, 45(3), pp. 430-479.

Hymes, D. (1974). *Foundations in sociolinguistics: An ethnographic approach*. Philadelphia: University of Pennsylvania Press.

Jaquith, J. R. (1976). Diagraphia in advertising: The public as guinea pig. *Visible Language*, 10(4), pp 295-308.

Jensen, H. (1970). *Sign, symbol and script: An account of man's efforts to write* (3rd revised and enlarged ed.). London: George Allen and Unwin.

Kaiser, S. (2003). Language and script in Japan and other East Asian countries: Between insularity and technology. In J. Maurais & M. A. Morris (Eds.), *Languages in a globalising world* (pp. 188-202). Cambridge: Cambridge University Press.

KAL (2004). *Kurdish Language Academy*. Accessed online on July 5, 2006 at http://www.kurdishacademy.org/english/indexe.html

Kara, G. (1996). Aramaic scripts for Altaic languages. In P. T. Daniels & W. Bright (Eds.), *The world's writing systems* (pp. 536-558). New York: Oxford University Press.

Kaye, A. S. (1996). Adaptations of Arabic script. In P. T. Daniels & W. Bright (Eds.), *The world's writing systems* (pp. 743-762). New York: Oxford University Press.

Kenrick, D. (1996). Romani literacy at the crossroads. *International Journal of the Sociology of Language*, 119, pp. 109-123.

King, C. R. (1994). *One language, two scripts: The Hindi Movement in nineteenth century North India.* Bombay: Oxford University Press.

King, C. (1994). Moldovan identity and the politics of pan-Romanianism. *Slavic Review*, 53(2), pp. 345-368.

King, R. (1996). Korean writing. In P. T. Daniels & W. Bright (Eds*.), The world's writing systems* (pp. 218-227). New York: Oxford University Press.

King, R. D. (2001). The poisonous potency of script: Hindi and Urdu. *International Journal of the Sociology of Language*, 150, pp. 43-59.

Kotei, S. I. A. (1977). The West African autochthonous alphabets: An exercise in comparative palaeography. In J. A. Fishman (Ed.), *Advances in the creation and revision of writing systems* (pp. 55-73). The Hague: Mouton.

Lehmann, R. P. M. (1989). Ogham: The ancient script of the Celts. In W. M. Senner (Ed.), *The*

origins of writing (pp. 159-170). Lincoln, NB: University of Nebraska Press.

Macri, M. J. (1996). Rongorongo of Easter Island. In P. T. Daniels & W. Bright (Eds.), *The world's writing systems* (pp. 183-188). New York: Oxford University Press.

Maffi, L. (2000). Language preservation vs. language maintenance and revitalization: Assessing concepts, approaches, and implications for the language sciences. *International Journal for the Sociology of Language*, 142, pp. 175-190.

Maffi, L. (2001). Language, knowledge, and indigenous heritage rights. In *On biocultural diversity: Linking language, knowledge, and the environment (*pp. 412-432). Washington: Smithsonian Institution Press.

Magner, T. F. (2001). Digraphia in the territories of the Croats and Serbs. *International Journal of the Sociology of Language*, 150, pp. 11-26.

Matin, A., Mathur, P. K. & Hasnain, I. (2001). Hindi-Urdu construct: Analyses of antagonism. In A. Abbi, R. S. Gupta & A. Kidwai (Eds.), *Linguistic structure and language dynamics in South Asia: Papers from the proceedings of SALA XVIII roundtable.* Delhi: Motilal.

Matras, Y. (1999). Writing Romani: The pragmatics of codification in a stateless language. *Applied Linguistics*, 20(4), pp. 481-502.

Matras, Y. (2004). *The future of Romani: Toward a policy of linguistic pluralism*. Accessed online at the University of Manchester on July 5, 2006 http://www.llc.manchester.ac.uk/Research/Project/romani/files/14_readings.shtml

McCarthy, S. (1995). The Cree syllabary and the writing system riddle: A paradigm in crisis. In I. Taylor & D. R. Olson (Eds.), *Scripts and literacy: Reading and learning to read alphabets, syllabaries and characters* (pp. 59-75). Dordrecht, Netherlands: Kluwer.

McManus, D. (1996a). Celtic languages. In P. T. Daniels & W. Bright (Eds.), *The world's writing systems* (pp. 655-660). New York: Oxford University Press.

McManus, D. (1996b). Ogham. In P. T. Daniels & W. Bright (Eds.), *The world's writing systems* (pp. 340-345). New York: Oxford University Press.

Millet, N. B. (1996). The Meroitic script. In P. T. Daniels & W. Bright (Eds.), *The world's writing systems* (pp. 84-87). New York: Oxford University Press.

Mingrelian Research Project (2001). Accessed online at the University of Lund, Sweden, Department of Linguistics and Phonetics on August 5, 2006 http://www.ling.lu.se/projects/Megrelian/Megrelian.html

Morison, S. (1972). *Politics and scripts: Aspects of authority and freedom in the development of Graeco-Latin script from the sixth century B.C. to the twentieth century A.D.* London: Oxford University Press.

Murdoch, J. (1985). Canadian hunter-gatherer adaptive strategies and indigenous language development. *International Journal of American Linguistics*, 51(4), pp. 518-521.

Nichols, J. D. (1996). The Cree syllabary. In P. T. Daniels & W. Bright (Eds.), *The world's writing systems* (pp. 599-611). New York: Oxford University Press.

Omniglot (2006). *Albanian*. Accessed online at Omniglot on July 14, 2006. http://www.omniglot.com/writing/albanian.htm#elbasan

Ophir, N. & Avrin, L. (1993). *Calligraphy: Hebrew lettering*. Jerusalem: Tav Publishing.

Poschenrieder, T. (2006). Zum großen Eszett im Deutschen aus sprachlicher Sicht. *Signa: Beiträge zur Signographie*, 9, pp. 5-19.

Reh, M. (2004). Multilingual writing: A reader-oriented typology – with examples from Lira Municipality (Uganda). *International Journal of the Sociology of Language,* 170, pp. 1-41.

Ritner, R. K. (1996a). Egyptian writing. In P. T. Daniels & W. Bright (Eds.), *The world's writing systems* (pp. 73-84). New York: Oxford University Press.

Ritner, R. K. (1996b). The Coptic alphabet. In P. T. Daniels & W. Bright (Eds.), *The world's writing systems* (pp. 287-290). New York: Oxford University Press.

Rogers, H. (2005). *Writing systems: A linguistic approach*. Malden, MA: Blackwell.

Salomon, R. G. (1996). Brahmi and Kharoshthi. In P. T. Daniels & W. Bright (Eds.), *The world's writing systems* (pp. 373-383). New York: Oxford University Press.

Scancarelli, J. (1996). Cherokee writing. In P. T. Daniels & W. Bright (Eds.), *The world's writing systems* (pp. 587-592). New York: Oxford University Press.

Scollon, R. & Wong Scollon, S. (1998). Literate design in the discourses of revolution, reform and transition: Hong Kong and China. *Written Language & Literacy*, 1(1), pp. 1-39.

Senner, W. M. (Ed.). (1989). *The origins of writing*. Lincoln, NB: University of Nebraska Press.

Singh, U. N. (2001). Multiscriptality in South Asia and language development. *International Journal of the Sociology of Language*, 150, pp. 61-74.

Skendi, S. (1960). The history of the Albanian alphabet: A case of complex cultural and political development. *Südostforschungen*, 19, 263-284.

Slezkine, Y. (1994). *Arctic mirrors: Russia and the small peoples of the North*. Ithaca, NY: Cornell University Press.

(Shibamoto) Smith, J. S. (1996). Japanese writing. In P. T. Daniels & W. Bright (Eds.), *The world's writing systems* (pp. 209-217). New York: Oxford University Press.

Smith, J. S. & Schmidt, D. L. (1996). Variability in written Japanese: Towards a sociolinguistics of script choice. *Visible Language*, 30(1), pp. 46-71.

Stötzner, A. (2006). Der 27. Buchstabe: Logik und Formung des versalen Eszett. *Signa: Beiträge zur Signographie*, 9, pp. 39-61.

Swiggers, P. & Jennings, W. (1996). The Anatolian alphabets. In P. T. Daniels & W. Bright (Eds.), *The world's writing systems* (pp. 281-287). New York: Oxford University Press.

Tiu, H.-K. (1998). Writing in two scripts: A case study of digraphia in Taiwanese. *Written Language & Literacy*, 1(2), pp. 225-247.

Trix, F. (1997). Alphabet conflict in the Balkans: Albanian and the Congress of Monastir. *International Journal for the Sociology of Language*, 128, pp. 1-23.

Unger, J. M. (1996). Taking digraphia seriously: Future software for East Asia. *Journal of the Chinese Language Teachers Association*, 31(3), pp. 45-55.

Unseth, P. (2005). Sociolinguistic parallels between choosing scripts and languages. *Written Language & Literacy*, 8(1), pp. 19-42.

Vajda, E. (2006). *Personal email communication.* July 2006.

Wallace, R. (1989). The origins and development of the Latin alphabet. In W. M. Senner (Ed.), *The origins of writing* (pp. 121-135). Lincoln, NB: University of Nebraska Press.

Wells, J. C. (2001). Orthographic diacritics and multilingual computing. *Language Problems & Language Planning*, 24(3), 249-272.

Winter, W. (1983). Tradition and innovation in alphabet making. In F. Coulmas & K. Ehlich (Eds.), *Writing in focus. Trends in linguistics: Studies and monographs 24* (pp. 227-238). Berlin: Mouton.

Zakariya, M. U. (1979). *The calligraphy of Islam: Reflections on the state of the art*. Washington: Center for Contemporary Arab Studies, Georgetown University.

Zima, P. (1974). Digraphia: The case of Hausa. *Linguistics*, 124, pp. 57-69.

Zhou, M. (2003). *Multilingualism in China: The politics of writing reforms for minority languages 1949 – 2002.* Berlin: Mouton de Gruyter.

Zide, N. (1996). Scripts for Munda languages. In P. T. Daniels & W. Bright (Eds.), *The world's writing systems* (pp. 612-618). New York: Oxford University Press.

Appendix – Scripts

No. 1 – Brāhmī derived scripts (Haarmann 1991: 521-523)

- Devanagari
- Gurmukhi
- Gujarati
- Bengali
- Oriya
- Tamil
- Malayalam
- Kannada
- Sinhalese

No. 2 – Georgian script (Haarmann 1991: 354)

No. 3 – Old Uyghur script (Kara 1996: 541)

No. 4 – Cuneiform writing (Haarmann 1991: 232)

No. 5 – Cyrillic alphabet (Haarmann 1991: 486)

No. 6 – Arabic alphabet (Kaye 1996: 747, 748, 754, 757, 758)

- for Farsi
- for Kurdish
- for Sindhi
- for Urdu
- for Turkish

No. 7 – Hurrian Cuneiform (Gragg 1996: 63)

No. 8 – Lycian alphabet (Swiggers & Jennings 1996: 283)

No. 9 – Aramaic alphabet (Jensen 1970: 301)

No. 10 – Pollard system (Zhou 2003: 316-321)

- original Pollard script
- reformed Pollard script (Roman)
- Pinyin-oriented Pollard script
- Reformed original Pollard script

No. 11 – Sequoyah script (Jensen 1970: 242)

No. 12 – Inuktitut writing (Nichols 1996: 607)

No. 13 – Abur alphabet (Haarmann 1991: 124)

No. 14 – Glagolitic script (Cubberley 1996: 348)

No. 15 – Etruscan writing (Jensen 1970: 516)

- Lepontic variant

No. 16 – Iberian script (Haarmann 1991: 418)

No. 17 – Kurdish writing (KAL online source)

- in Roman

- in Cyrillic

No. 18 – Ethiopic syllabary (Jensen 1970: 345)

No. 19 – Deseret alphabet (Glück 1987: 261, 262)

No. 20 – Japanese writing (Smith 1996: 211, 215)

No. 21 – Hangul (King 1996: 224)

No. 22 – Egyptian writing (Haarmann 1991: 104, 105)
- Hieroglyphics
- Hieratic
- Demotic

No. 23 – Mongolian script (Haarmann 1991: 512)

No. 24 – Dehong Dai: Tainüa writing (Zhou 2003: 336-341)

No. 25 – Albanian writing
- Stamboul alphabet (Trix 1997: 6)
- Bashkimi alphabet (Trix 1997: 6)
- Elbasan script (Omniglot online source)

No. 26 – Meroitic script (Haarmann 1991: 390)
- Hieroglyphic variant
- Demotic variant

No. 27 – Coptic script (Campbell 1997: 39)

No. 28 – Ol Chiki script (Zide 1996: 613)

No. 29 – Armenian alphabet (Haarmann 1991: 348)

No. 30 – Ogham (Lehmann 1989: 160)

No. 31 – Futhark Runes (Haarmann 1991: 464)

No. 32 – Balti script (Jensen 1970: 335)

No. 33 – Dhivehi writing (Gair & Cain 1996: 567)
- Thaana

No. 34 – Orkhon Runes (Kara 1996: 537)

No. 35 – Sogdian script (Haarmann 1991: 506)

No. 36 – Nestorian inscription (Haarmann 1991: 304)

No. 37 – Rongorongo (Haarmann 1991: 189)

No. 38 – Gothic script (Campbell 1997: 62)

No. 39 – Indus script (Haarmann 1991: 162, 163)
- a small sample of signs

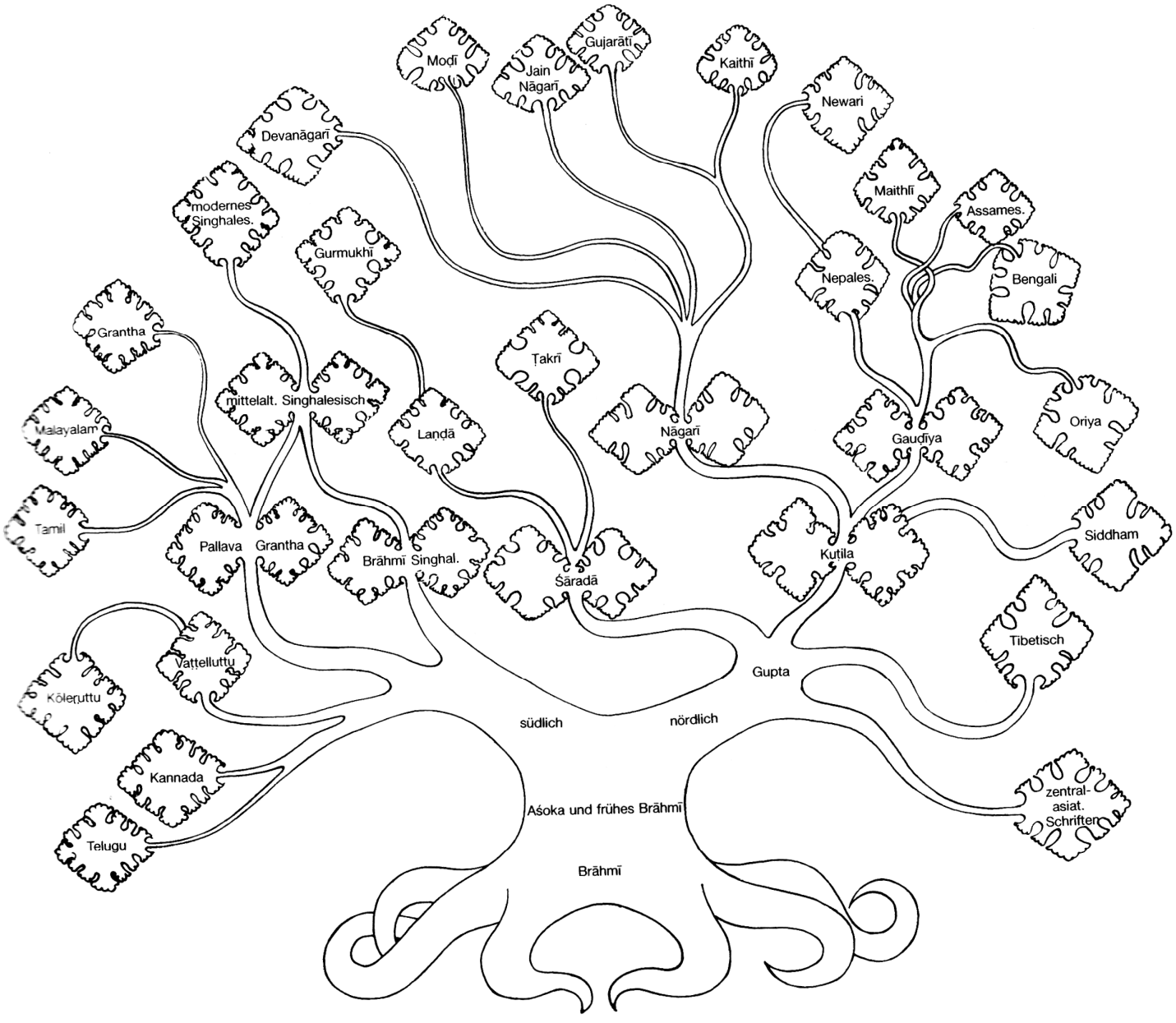
No. 40 – Linear B (Haarmann 1991: 244)

No. 41 – Hebrew letters
- Rashi (Ophir & Avrin 1993: 67)
- Square (Fishman 2001: 30)

No. 42 – Arabic calligraphy (Zakariya 1979: 18, 25, 30, 31)
- Kufic
- Nashk
- Nastaliq
- Maghribi

No. 1 – Brahmi derived scripts (Haarmann 1991: 521-523)

- Devanagari
- Gurmukhi
- Gujarati
- Bengali
- Oriya
- Tamil
- Malayalam
- Kannada
- Sinhalese



ग्यारह बजे वहां पहुंचा था और पौने तीन बजे अवकाश पा यह सन्देश लाया हूं कि कमला अपनी भाभी माया के साथ आयेगी। उसकी मां तो रजनी भाभी के घर पर थी। उसके भाई बिहारी-

Devanagari

ਉਲੂ ਵਲ ਵੇਖਿਆ ਈ ਨਾ ਜਾਏ। ਉਸ ਨਾਲ ਅੱਖਾ ਈ ਨਾ ਮਿਲਾਈਆਂ ਜਾਣ। ਪਿਛੇ-ਤਾਨ ਤੁਰਦੇ ਤੁਰਦੇ ਸੀੜੀਆਂ ਤੋਂ ਕਾਗਜ ਚੁੱਕੇ ਜਾਣ...। ਜੇ ਉਲੂ ਉੱਡ ਕੇ ਖਾਏਗਾ ਵੀ ਜਾਂ ਦੰਦੀਆਂ ਵੱਢੇਗਾ ਤਾਂ ਵੀ ਮੂੰਹ ਤਾਂ ਬਚ ਈ ਜਾਏਗਾ। ਲੱਕ

Gurmukhi

ગાંધીયુગમાં આપણા વિવેચનનું લક્ષ્ય પાછળથી કાવ્ય પરથી ખસીને કવિ તરફ ગયેલું લાગે – ખાસ કરીને ઉમાશંકરમાં. કવિની સાધના, કવિની શ્રદ્ધા, કવિનો સર્જનવ્યાપાર – આ બધા વિશે

Gujarati

বদলে রইলো এই ঘড়ি। একটু অদ্ভুত ঘড়ি। এই ঘড়িটাই শব্দ ক'রে তাল দিতো গানের সঙ্গে-সঙ্গে। একটা যন্ত্র ঘুরিয়ে দিলে প্রত্যেকটি টিকটিক আওয়াজ রীতিমতো জোরে তবলার বোলের মতো টকটক

Bengali

ସେତେବେଳେ କବି ଲେଖୁଥାନ୍ତି କମ୍ବା ଧ୍ୟାନମଗ୍ନ ଥାନ୍ତି ।
ଅନେକ ସୂଚନା ମିଳିବ ଯେ, ଯେବେ କୌଣସି ଉଚ୍ଚ ମହଲରୁ
ଡାକୁଁ ଯିବାପାଇଁ ଡାକରା ଆସେ, ସେ ବଡ଼ ଅସ୍ୱସ୍ତି ବୋଧ

Oriya

சுதந்திர புருஷர்களாய் இந்த மண்ணில் வாழ்ந்த முன்னோர்
களின் நினைவு தோன்றி அவர்களைப்போல் நாமும் சுதந்திரப்
பிரஜைகளாய் வாழ வேண்டும் என்ற தீவிரம் நமக்கு

Tamil

രതിയുടെ മുഖം കുനിഞ്ഞു. കാരണമില്ലാതെ ശരീരം
വിറച്ചു. നെഞ്ചിൽ ചൂണ്ടൽകൊക്ക കൊളുത്തി വലിക്കു
ന്ന അനുഭവം. എന്തൊരുളുപ്പുകെട്ട മനുഷ്യനാണിയാൾ.

Malayalam

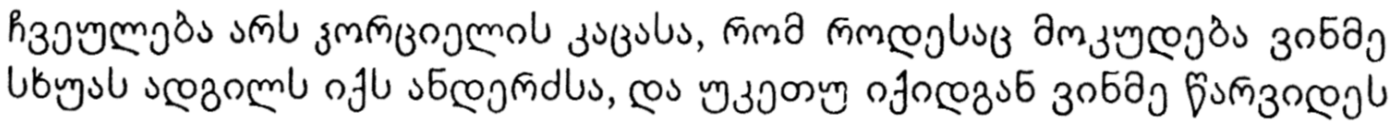
ಹೋಗು ನೀನೇನು ಮಾಡುತ್ತಿ."
ನಾನು ಊರಲ್ಲಿ ತುಂಬ ಆಸ್ತಿವಂತ ಮುದುಕ. ನನ್ನ ಒಬ್ಬನೇ ಮಗ
ಇವನ ಕೈಗುಣದಿಂದಲೇ ಬದುಕಿದ್ದ. ಆ ಸಂತೋಷ ಒಂದು ಕಡೆಗೆ. ನನ್ನನ್ನು

Kannada

ගැනීමයි. එවිටයි සාහිත්‍ය කලාවෙන් කළ හැකි කළ යුතු සංස්
කෘතික විප්ලවය සාර්ථක වන්නේ. සම්ප්‍රදායිකව ආරක්ෂා
කළ යුත්තේ ඇත්ත වශයෙන්ම අධික ආර්ථික දියුණුව නිසා

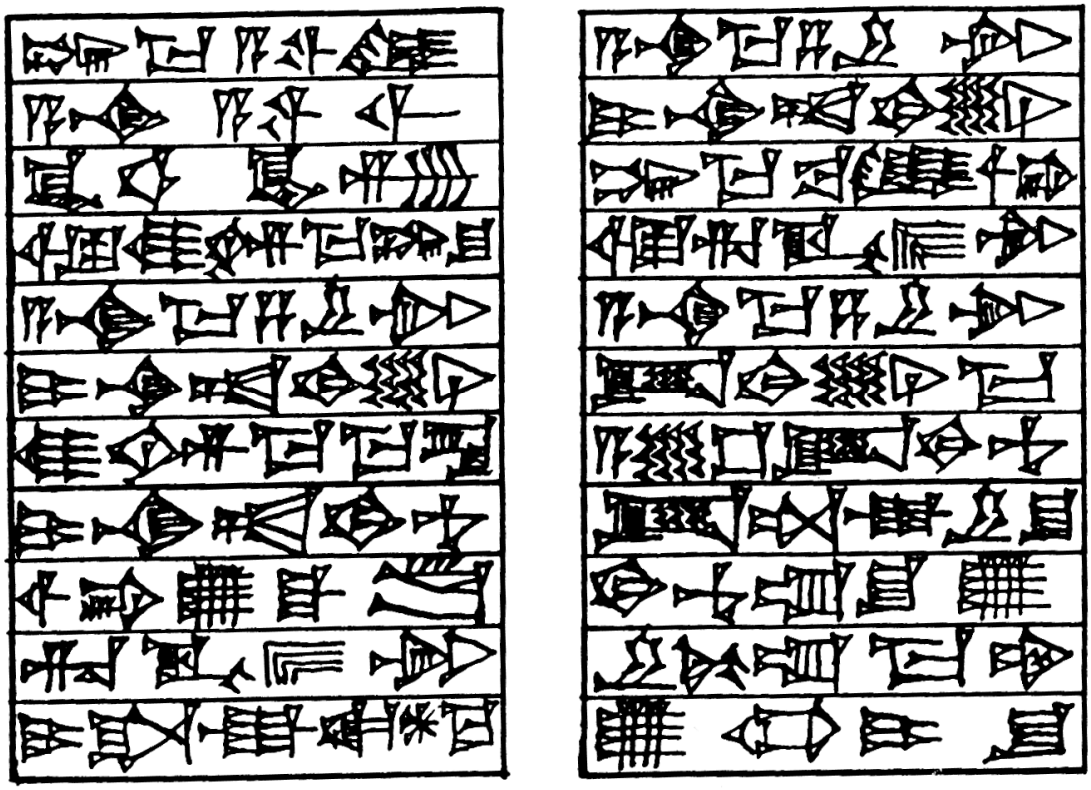
Sinhalese

No. 2 – Georgian script (Haarmann 1991: 354)

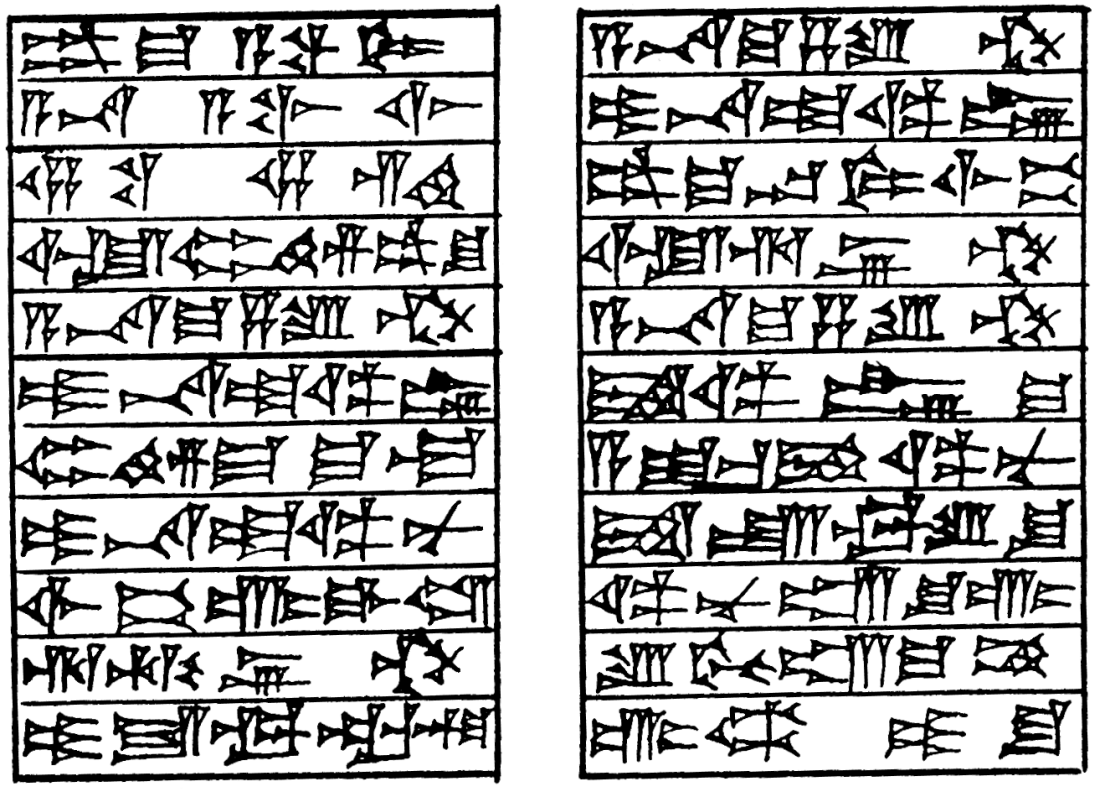


No. 3 – Old Uyghur script (Kara 1996: 541)

No. 4 – Cuneiform writing (Haarmann 1991: 232)

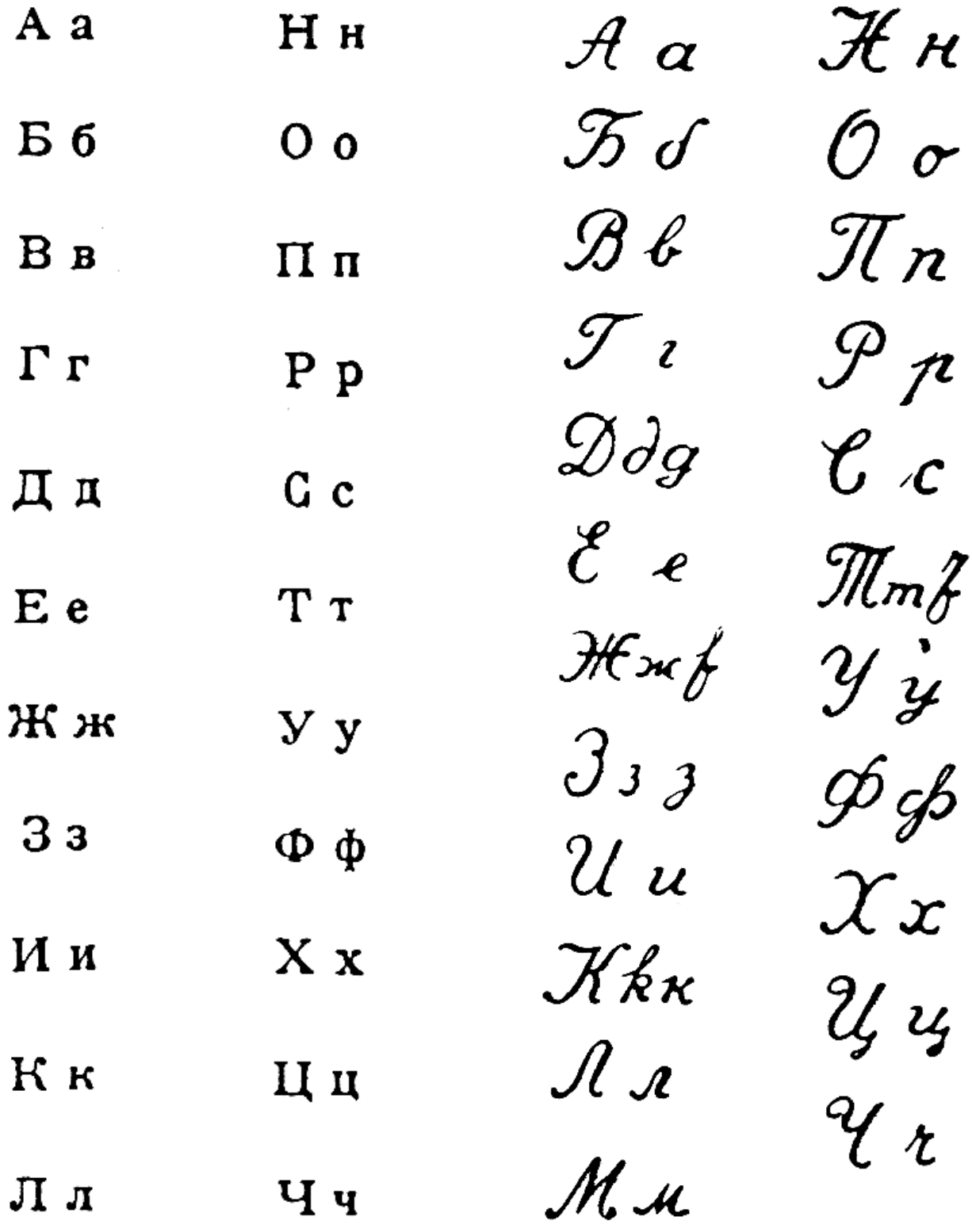


Old Babylonian



Neo-Assyrian

No. 5 – Cyrillic alphabet (Haarmann 1991: 486)



No. 6 – Arabic alphabet
(Kaye 1996: 747, 748, 754-758)

- for Farsi
- for Kurdish
- for Sindhi
- for Urdu
- for Turkish

Farsi

(from left to right:

isolated letters
final letters
initial letters
medial letters)

ا	ـا		
ب	ـب	بـ	ببـ
پ	ـپ	پـ	پپـ
ت	ـت	تـ	ببـ
ث	ـث	ثـ	ثثـ
ج	ـج	جـ	ججـ
چ	ـچ	چـ	ققـ
ح	ـح	حـ	ححـ
خ	ـخ	خـ	ححـ
د	ـد		
ذ	ـذ		
ر	ـر		
ز	ـز		
ژ	ـژ		
س	ـس	سـ	ســ
ش	ـش	شـ	شــ
ص	ـص	صـ	صــ
ض	ـض	ضـ	ضــ
ط	ـط	طـ	طــ
ظ	ـظ	ظـ	ظــ
ع	ـع	عـ	عــ
غ	ـغ	غـ	غــ
ف	ـف	فـ	فــ
ق	ـق	قـ	قــ
ک	ـك	کـ	کــ
گ	ـگ	گـ	گــ
ل	ـل	لـ	لــ
م	ـم	مـ	مــ
ن	ـن	نـ	نــ
و	ـو		
ه, ة	ـه, ـة	هـ	هــ
ی	ـی	یـ	یــ

Kurdish

- consonant symbols

(from left to right:

isolated letters
final letters
initial letters
medial letters)

ا	ا		
ب	ب	ب	بـ
پ	پ	پ	پـ
ت	ت	ت	تـ
ج	ج	ج	جـ
چ	چ	چ	چـ
ح	ح	ح	حـ
خ	خ	خ	خـ
د	د		
ر	ر		
ڕ	ڕ		
ز	ز		
ژ	ژ		
س	س	س	سـ
ش	ش	ش	شـ
ص	ص	ص	صـ
ع	ع	ع	عـ
غ	غ	غ	غـ
ف	ف	ف	فـ
ڤ	ڤ	ڤ	ڤـ
ق	ق	ق	قـ
ك	ك	ك	كـ
گ	گ	گ	گـ
ل	ل	ل	لـ
ڵ	ڵ	ڵ	ڵـ
م	م	م	مـ
ن	ن	ن	نـ
و	و		
ه	ه	ه	هـ
ی	ی	ی	یـ

Kurdish

- vowels symbols

(from left to right:

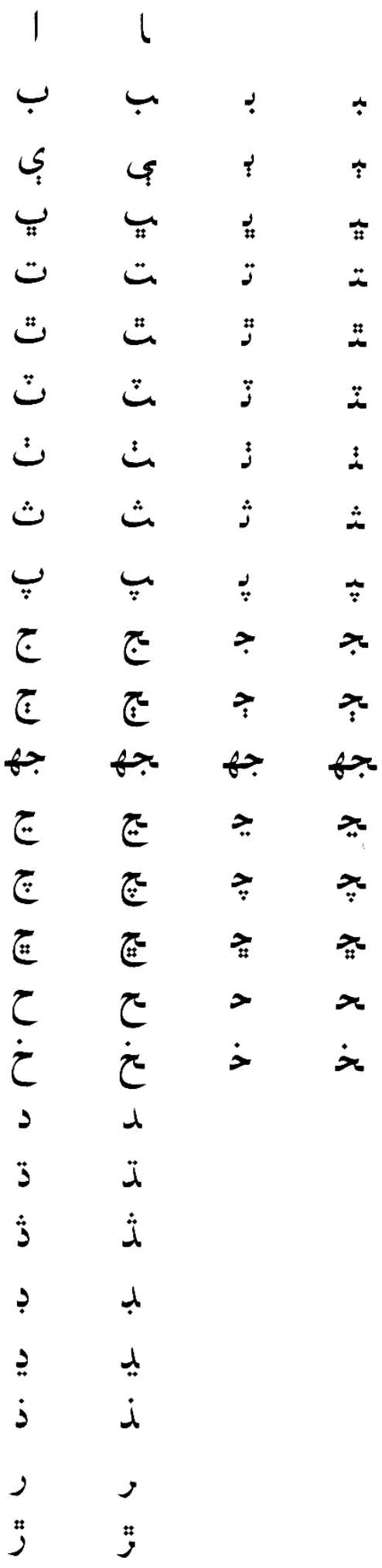
isolated letters
final letters
initial letters
medial letters)

ه (ه)	ھ	ھ	ھ
ا	ا		
و	و		
وو	وو		
یی	یی	ییـ	ییـ
ی	ی		ێ
ۆ	ۆ		ۆ

Sindhi

(from left to right:

isolated letters
final letters
initial letters
medial letters)



		ز	ز
سـ	سـ	س	س
شـ	شـ	ش	ش
صـ	صـ	ص	ص
ضـ	ضـ	ض	ض
طـ	طـ	ط	ط
ظـ	ظـ	ظ	ظ
عـ	عـ	ع	ع
غـ	غـ	غ	غ
فـ	فـ	ف	ف
قّـ	قّـ	قّ	قّ
قـ	قـ	ق	ق
كـ	كـ	ك	ك
كـ	كـ	ك	ك
گـ	گـ	گ	گ
گـ	گـ	گ	گ
كھ	كھ	كھ	كھ
گّ	گّ	گّ	گّ
لـ	لـ	ل	ل
مـ	مـ	م	م
نـ	نـ	ن	ن
ٹـ	ٹـ	ٹ	ٹ
		و	و
ھ	ھ	ہ	ھ, ہ
یـ	یـ	ي	ي

Urdu

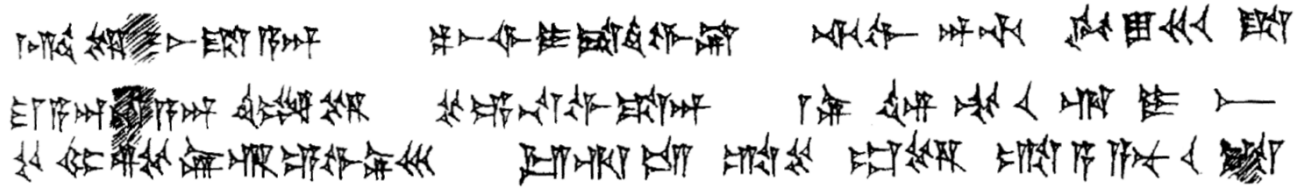
(from left to right:

isolated letters
final letters
initial letters
medial letters)

ا	ا		
ب	ب	بـ	
پ	پ	پـ	
ت	ت	تـ	
ٹ	ٹ	ٹـ	
ث	ث	ثـ	
ج	ج	جـ	
چ	چ	چـ	
ح	ح	حـ	
خ	خ	خـ	
د	د		
ڈ	ڈ		
ذ	ذ		
ر	ر		
ڑ	ڑ		
ز	ز		
ژ	ژ		
س	س	سـ	سـ
ش	ش	شـ	شـ
ص	ص	صـ	صـ
ض	ض	ضـ	ضـ
ط	ط	طـ	طـ
ظ	ظ	ظـ	ظـ
ع	ع	عـ	عـ
غ	غ	غـ	غـ
ف	ف	فـ	فـ
ق	ق	قـ	قـ
ک	ک	کـ	کـ
گ	گ	گـ	گـ
ل	ل	لـ	لـ
م	م	مـ	مـ
ن	ن	نـ	نـ
ں	ں	ـں	ـں
و	و		
ہ	ہ	ھـ	ـہ
ۃ	ۃ		ـۃ
ی	ی	یـ	ـی

	ا	ا		
	ب	بـ	ـبـ	ـب
	پ	پـ	ـپـ	ـپ
	ت	تـ	ـتـ	ـت
	ث	ثـ	ـثـ	ـث
	ج	جـ	ـجـ	ـج
	چ	چـ	ـچـ	ـچ
	ح	حـ	ـحـ	ـح
	خ	خـ	ـخـ	ـخ
	د	د		ـد
	ذ	ذ		ـذ
	ر	ر		ـر
	ز	ز		ـز
	ژ	ژ		ـژ
Turkish	س	سـ	ـسـ	ـس
	ش	شـ	ـشـ	ـش
(from left to right:	ص	صـ	ـصـ	ـص
	ض	ضـ	ـضـ	ـض
isolated letters	ط	طـ	ـطـ	ـط
final letters	ظ	ظـ	ـظـ	ـظ
initial letters	ع	عـ	ـعـ	ـع
medial letters)	غ	غـ	ـغـ	ـغ
	ف	فـ	ـفـ	ـف
	ق	قـ	ـقـ	ـق
	ك	كـ	ـكـ	ـك
	گ	گـ	ـگـ	ـگ
	ڭ	–	ـڭـ	ـڭ
	ل	لـ	ـلـ	ـل
	م	مـ	ـمـ	ـم
	ن	نـ	ـنـ	ـن
	و	و		ـو
	ه, ة	هـ	ـهـ	ـه, ـة
	ى	يـ	ـيـ	ـى

No. 7 – Hurrian Cuneiform (Gragg 1996: 63, 64)



1. *Cuneiform:*		
2. *Transliteration:*	^{m}Kè-li-[i]-aš-ša-a-an	pa-aš-ši-i-it-ḫi-iw-wu-uš
3. *Transcription:*	kelia-ʃ-(nn)a-an	paʃʃ-itxi-iffu-ʃ
4. *Gloss:*	Kelia-ERG-it(OBJ)-and	send-NOMINALIZER-my-ERG

1.				
2. ti-we	an-ti	ku$_{8}$-lu-u-ša	ma-a-an-[na]-a-am	ḫi-il-li
3. tive	andi	kul-oʒ-a	manna-an	xill-i
4. word	this	say-PAST-3SG(SUBJ)	PRONOMINAL-and	speak-PART

1.			
2. še-e-na-wu-ša-an	^{m}Ni-im-mu-u-ri-i-aš	^{kur}Mi-sí-ir-re-e-we-né-eš	
3. ʃena-f-ʃ-an	nimmoria-ʃ	misir(i)-(n)e-ve-ne-ʃ	
4. brother-your-ERG-and	Nimmoria-ERG	Egypt-DEF-of-DEF-ERG	

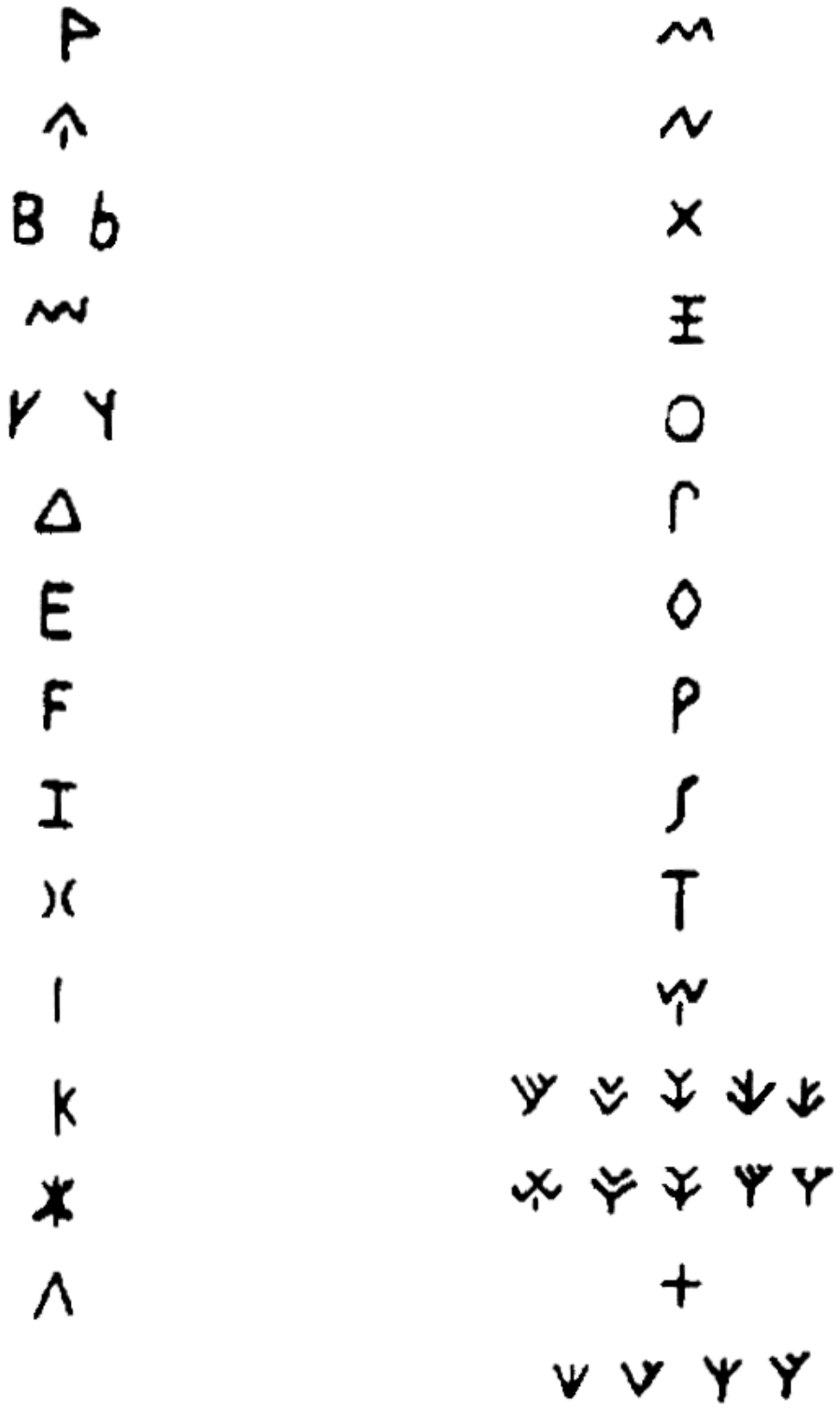
1.			
2. ew-ri-iš	ta-še	ap-li	ta-a-a-nu-u-ša
3. evre-ʃ	taʒe	apli	tan-oʒ-a
4. lord-ERG	gift	great(?)	make-PAST-3SG(SUBJ)

‘And Kelia, my messenger, said this word: thus speaking, “Your brother, Nimmoria, the lord of Egypt, made a great(?) gift.”’

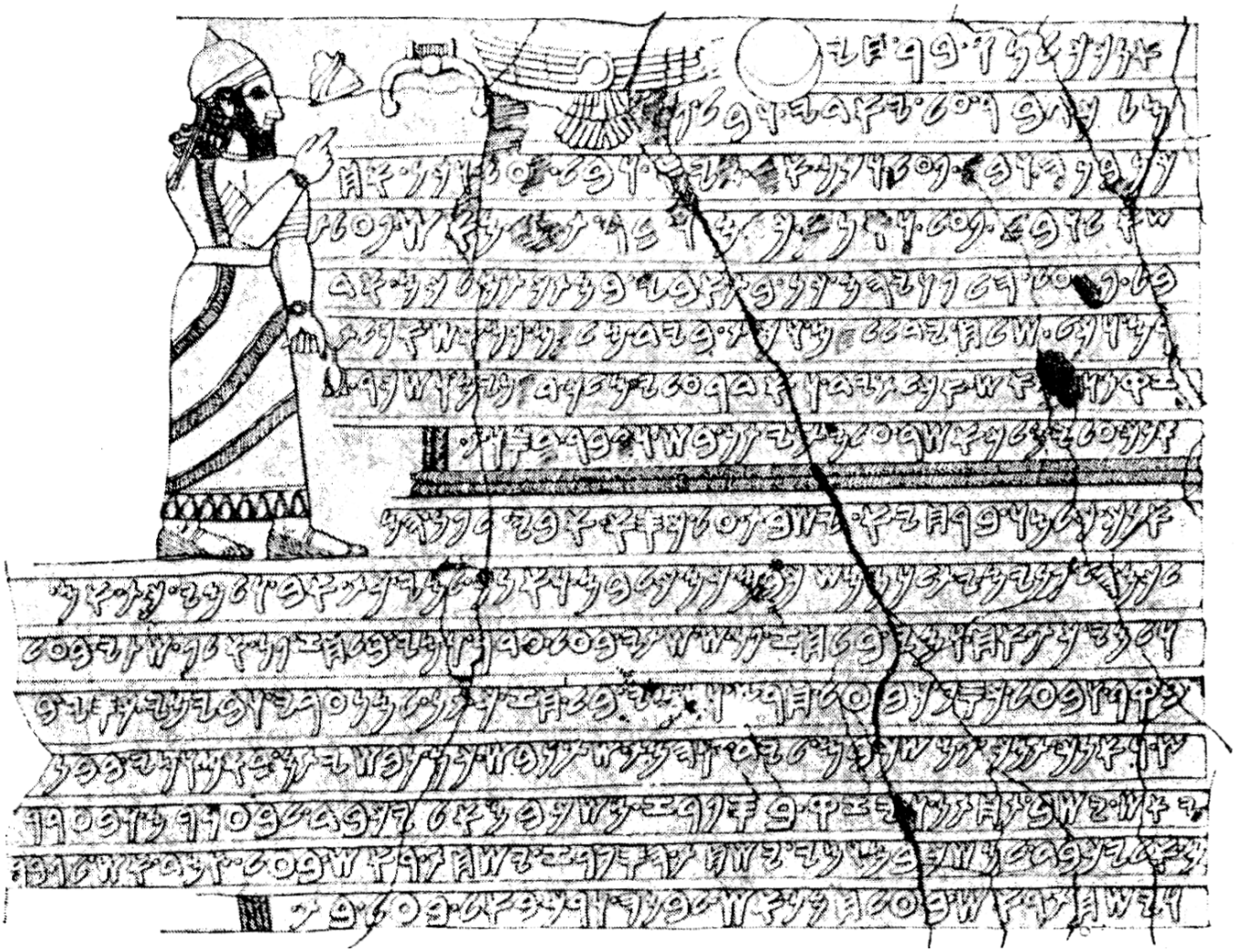
—Mitanni letter lines 83–85 (Schroeder 1915, no. 200).

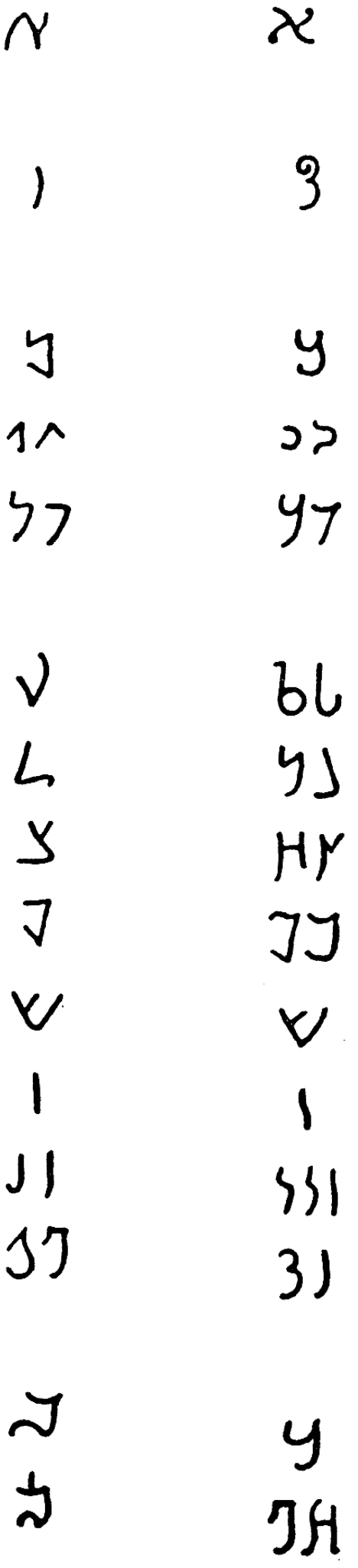
f-, v-, w-, ff-CV sign (PI)

No. 8 – Lycian alphabet (Swiggers & Jennings 1996: 283)



No. 9 – Aramaic alphabet (Jensen 1970: 301)



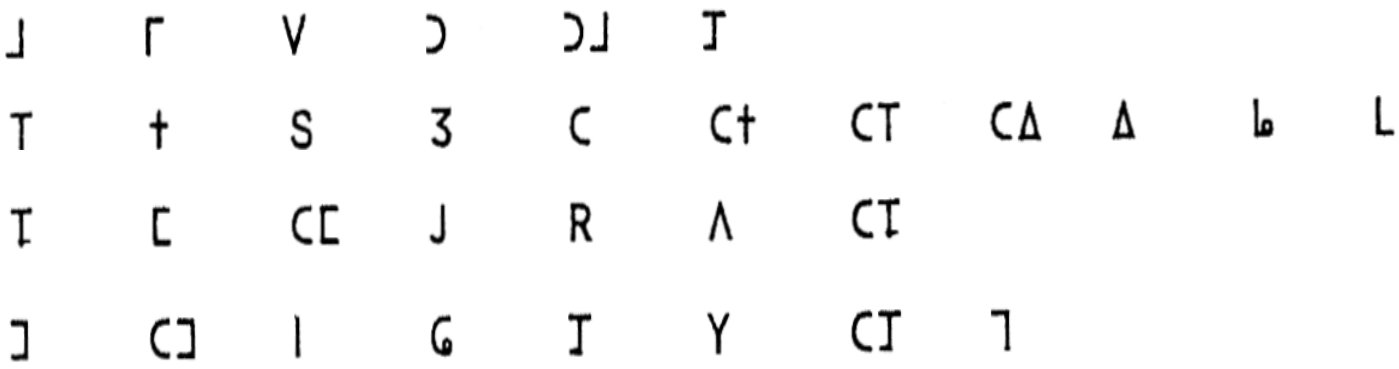


from Jerusalem,
1st century AD

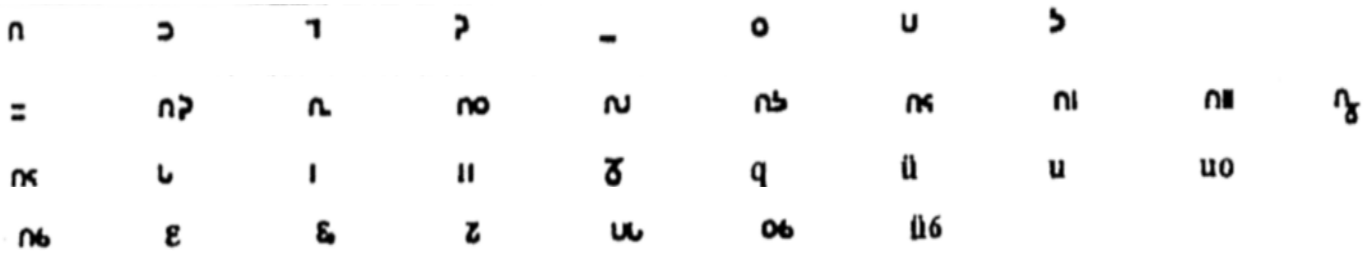
from Palmyrene,
4th century AD

No. 10 – Pollard system (Zhou 2003: 316-321)

- original Pollard script
- reformed Pollard script (Roman)
- Pinyin-oriented Pollard script
- Reformed original Pollard script



Original Pollard - initials



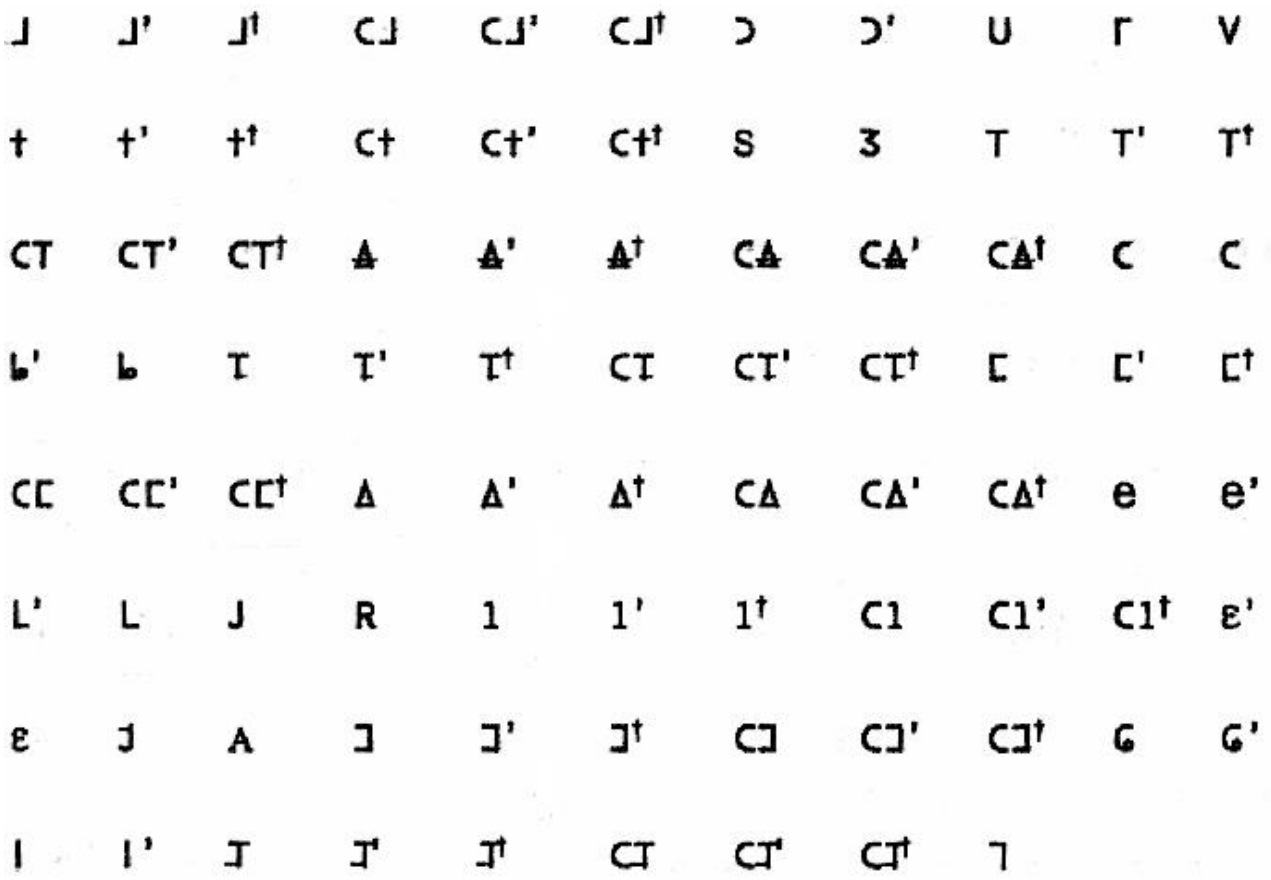
Original Pollard - finals

Aa Bb Ьь Cc Dd đđ Ee Ff Gg Гг Hh Ii Jj Kk Ll Mm
Шш Nn Иŋ Oo Pp Qq Rr Ss Tt Uu Vv Ww Xx Yy Zz Зз

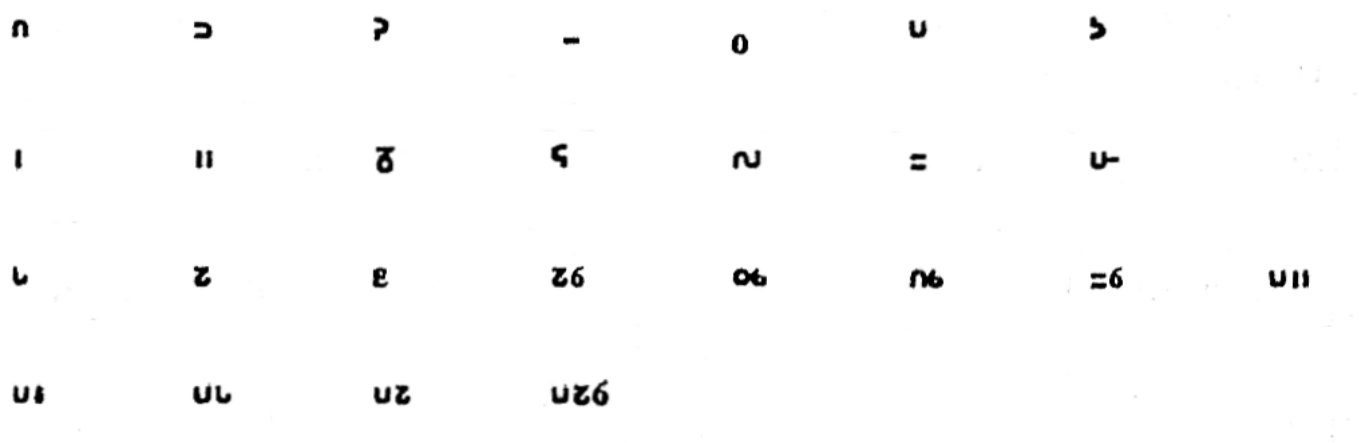
Reformed Pollard system (1957)

Aa Bb Cc Dd Ee Ff Gg Hh Ii Jj Kk Ll Mm
Nn Oo Pp Qq Rr Ss Tt Uu Vv Ww Xx Yy Zz

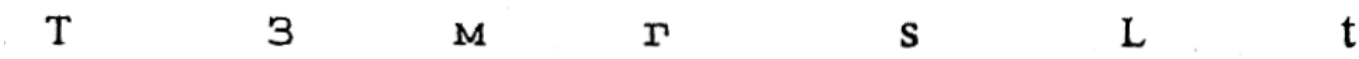
Pinyin-oriented Pollard system (1958)



Reformed original Pollard (1998) - initials

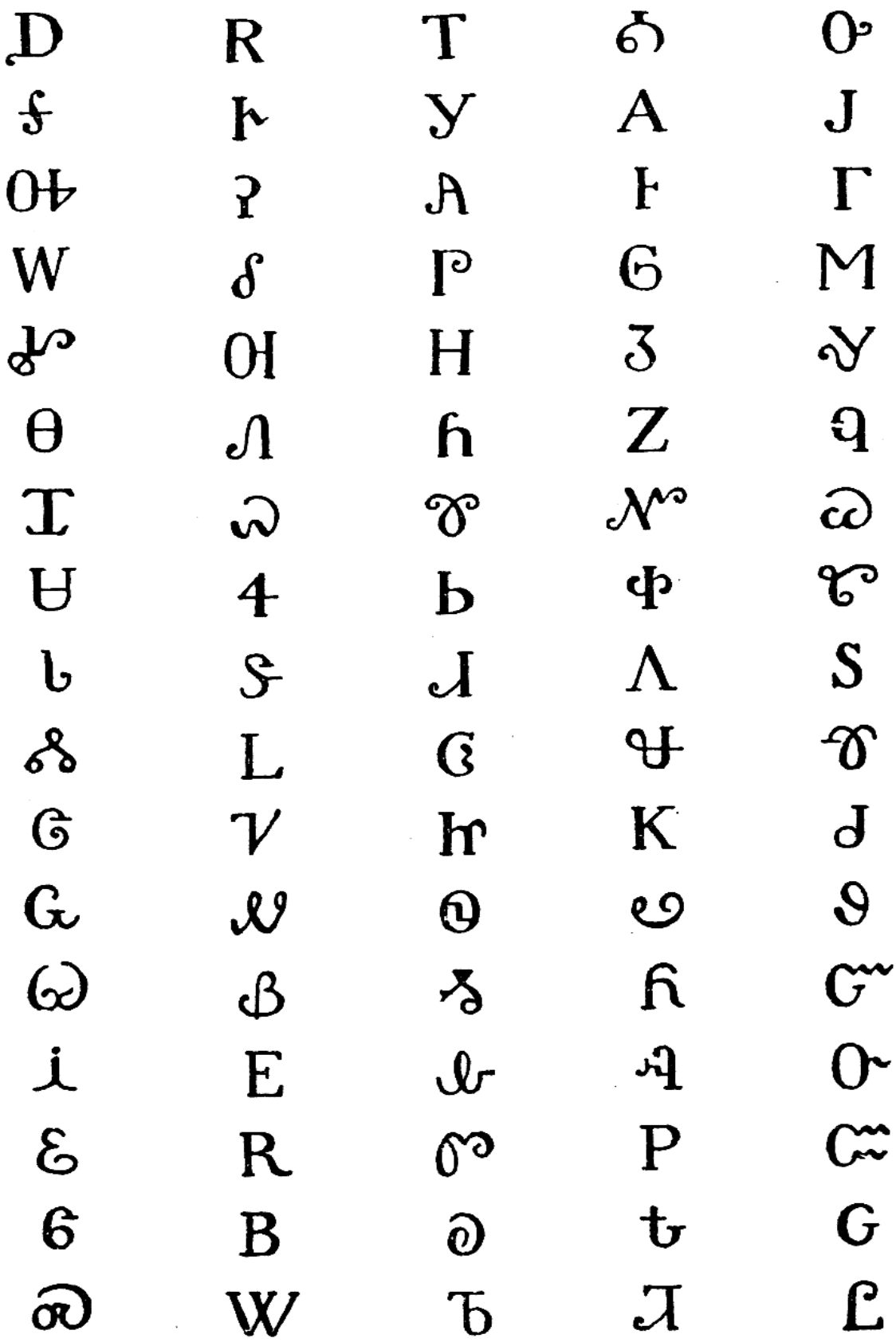


Reformed original Pollard (1998) - finals

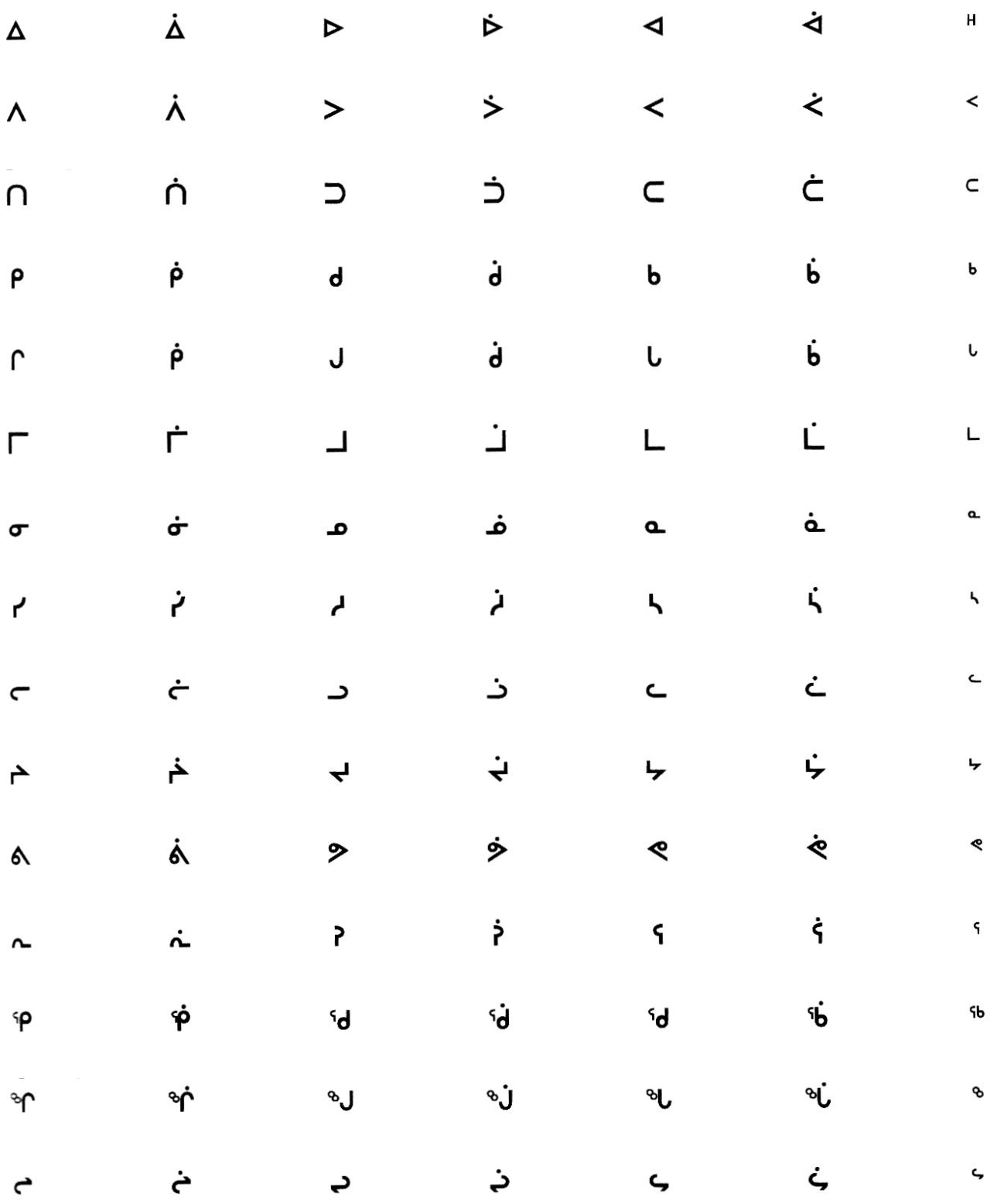


Reformed original Pollard (1998) - tone symbols

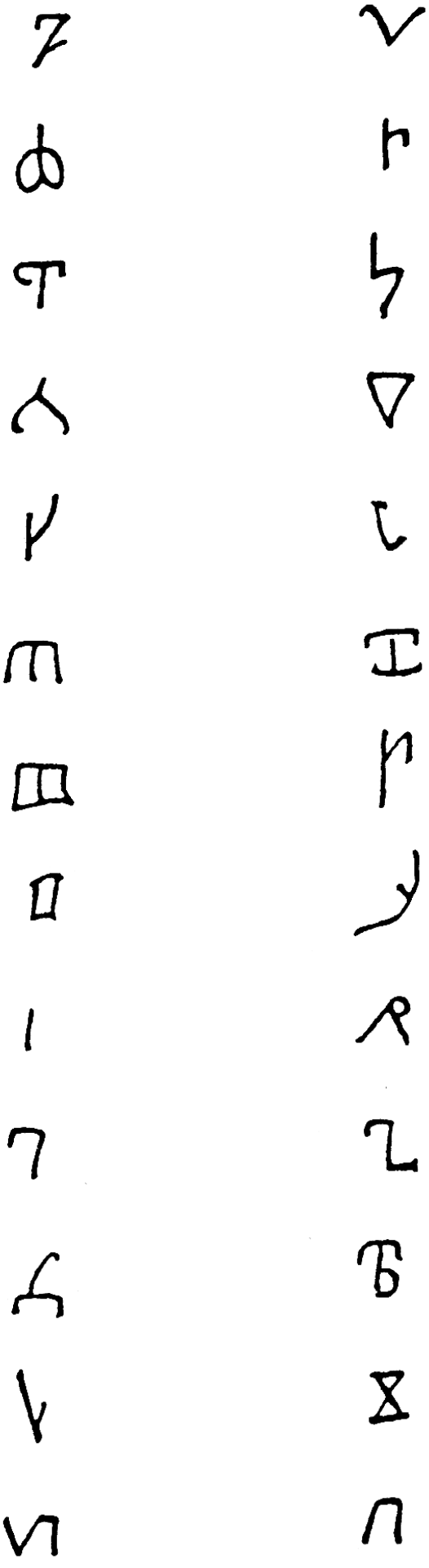
No. 11 – Sequoyah script (Jensen 1970: 242)



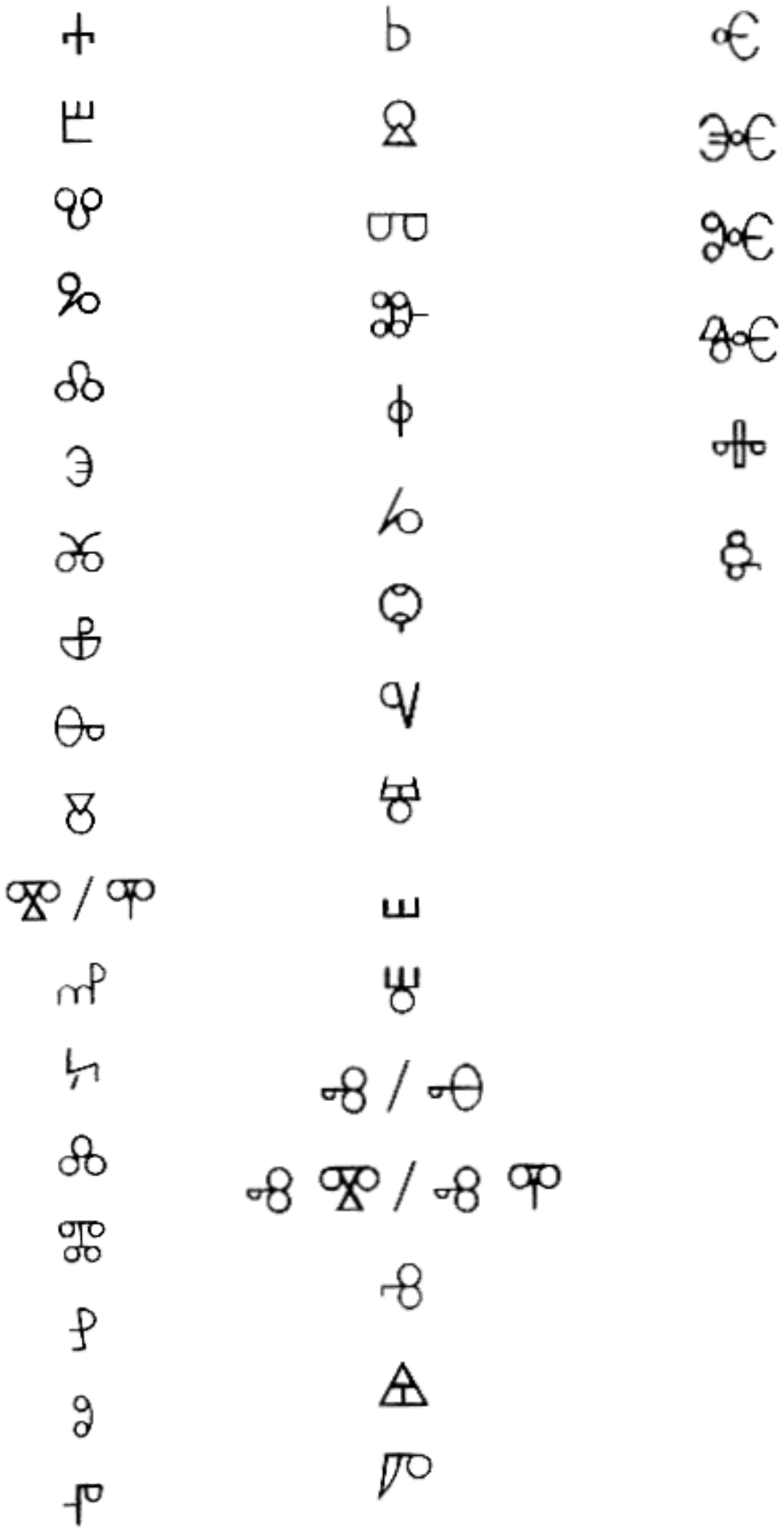
No. 12 – Inuktitut writing (Nichols 1996: 607)



No. 13 – Abur alphabet (Haarmann 1991: 126)

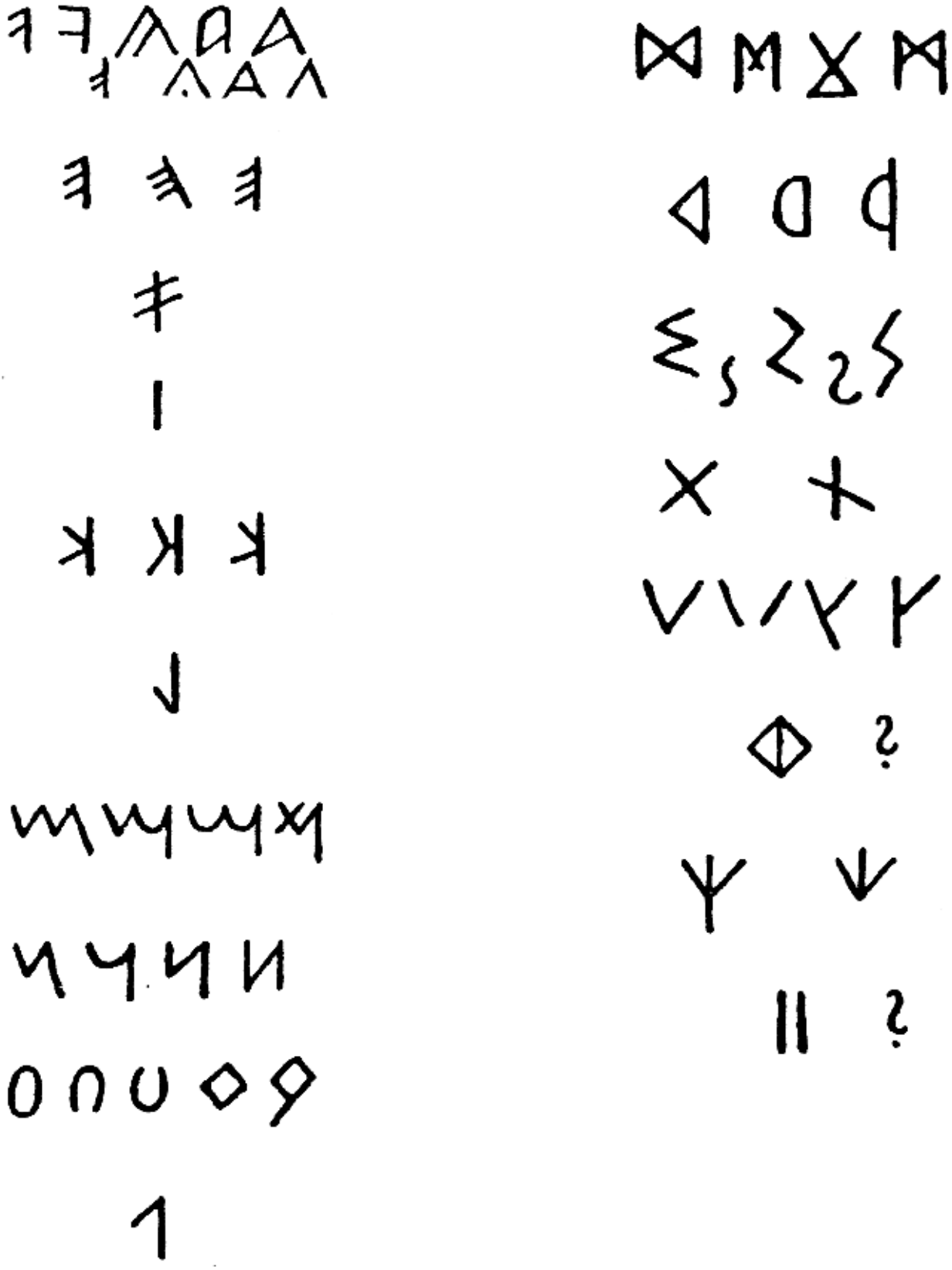


No. 14 – Glagolitic script (Cubberley 1996: 348)

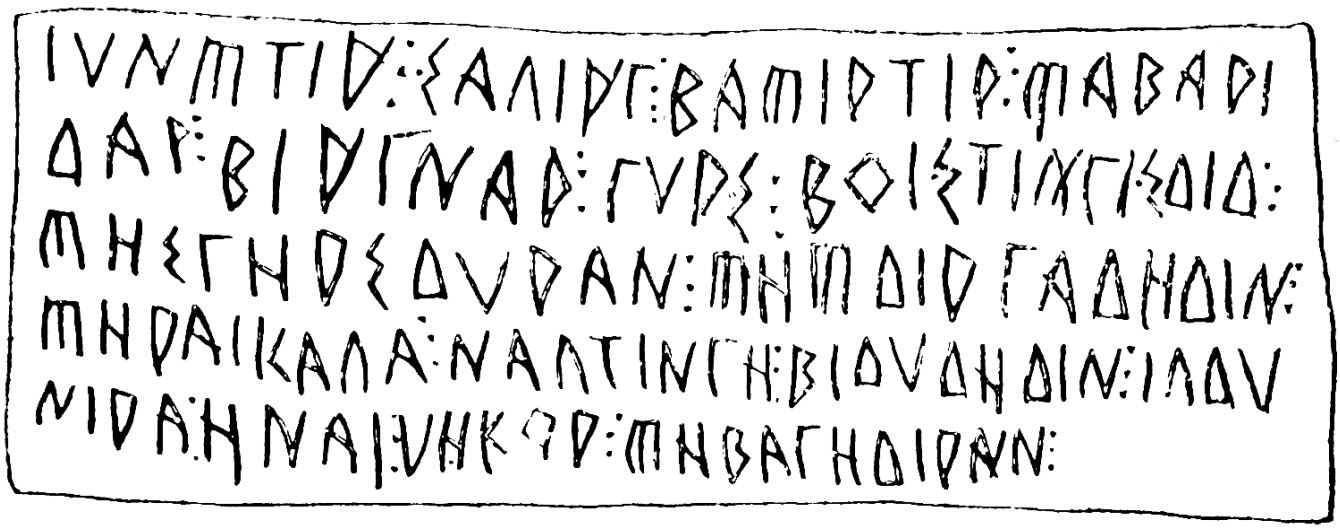


No. 15 – Etruscan writing (Jensen 1970: 516)

- Lepontic variant

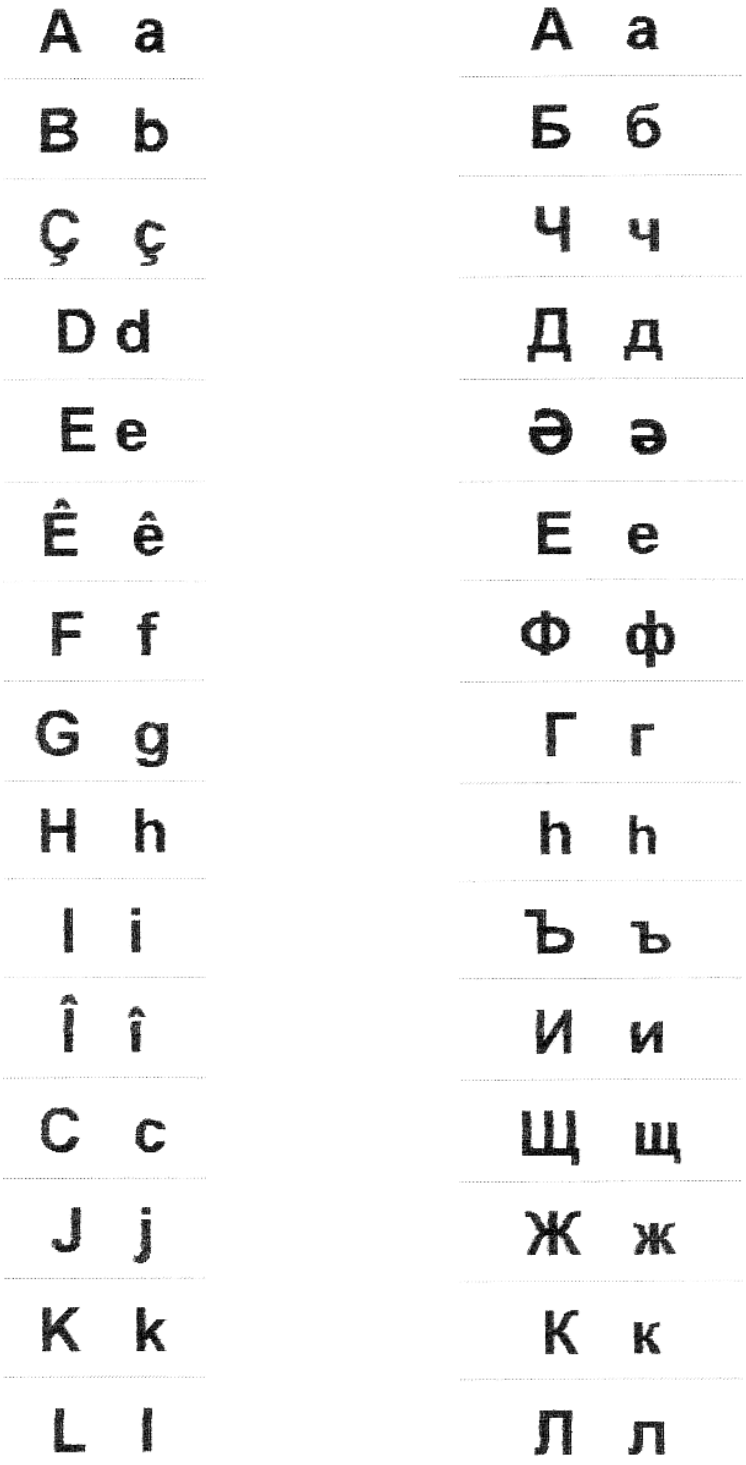


No. 16 – Iberian script (Haarmann 1991: 418)



No. 17 – Kurdish writing (KAL online source)

- in Roman
- in Cyrillic



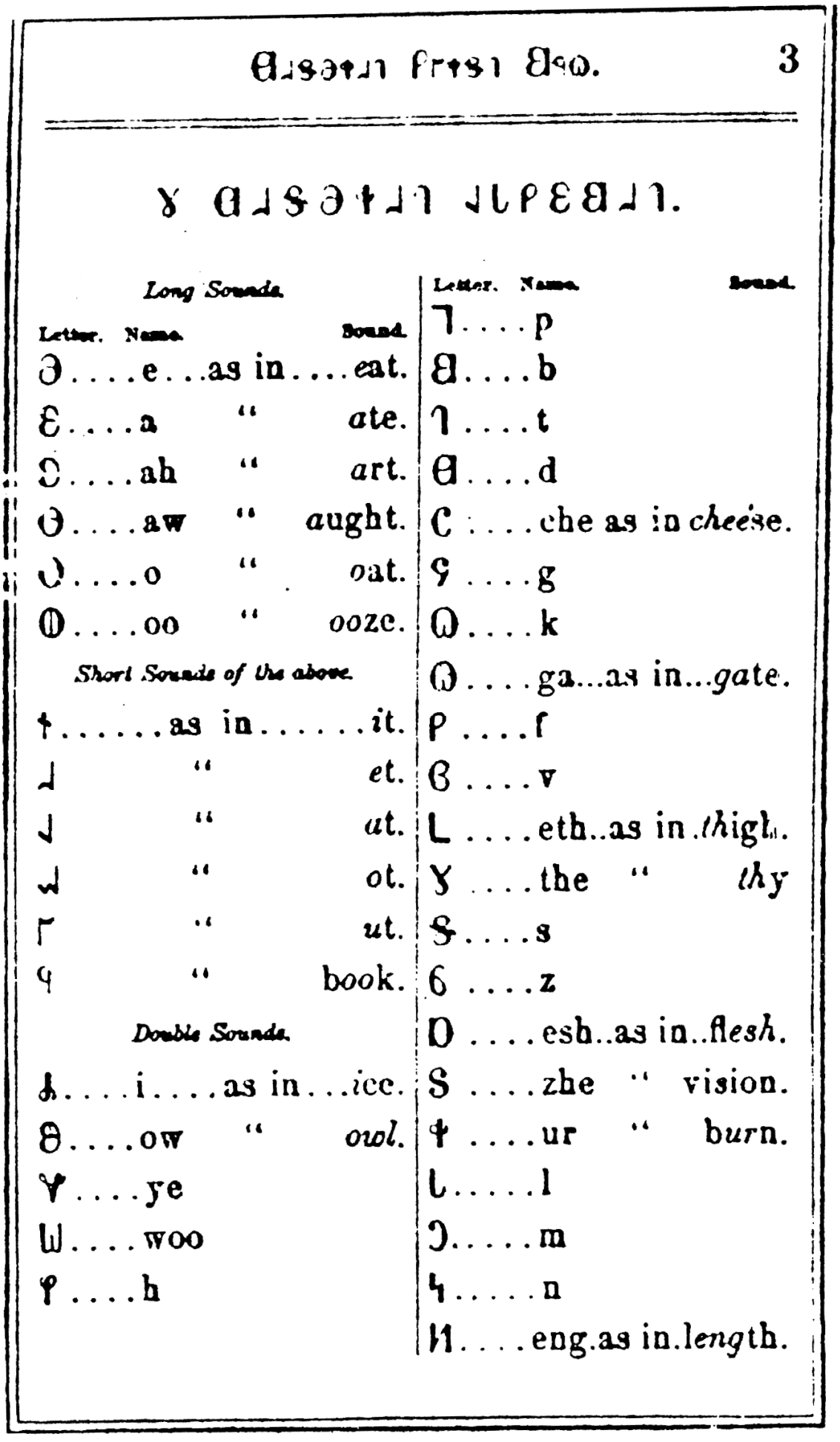
A a	А а
B b	Б б
Ç ç	Ч ч
D d	Д д
E e	Ә ә
Ê ê	Е е
F f	Ф ф
G g	Г г
H h	һ һ
I i	Ъ ъ
Î î	И и
C c	Щ щ
J j	Ж ж
K k	К к
L l	Л л

M	m
N	n
O	o
P	p
Q	q
R	r
S	s
Ş	ş
T	t
U	u
Û	û
V	v
W	w
X	x
Y	y
Z	z

М	м
Н	н
О	о
П	п
Q	q
Р	р
Р´	р´
С	с
Ш	ш
Т	т
Ӧ	ӧ
Ү	ү
В	в
W	w
Х	х
Й	й
З	з
h´	h´
Ә'	ә'
Г´	г´

No. 18 – Ethiopic syllabary (Jensen 1970: 345)

No. 19 – Deseret alphabet (Glück 1987: 261, 262)



3

Long Sounds.

Letter.	Name.		Sound.
𐑱	e	as in	*eat.*
𐑲	a	"	*ate.*
𐑭	ah	"	*art.*
𐑷	aw	"	*aught.*
𐑴	o	"	*oat.*
𐑵	oo	"	*ooze.*

Short Sounds of the above.

𐑦		as in	*it.*
𐑧		"	*et.*
𐑨		"	*at.*
𐑪		"	*ot.*
𐑳		"	*ut.*
𐑫		"	book.

Double Sounds.

𐑲𐑦	i	as in	*ice.*
𐑬	ow	"	*owl.*
𐑘	ye		
𐑢	woo		
𐑣	h		

Letter.	Name.		Sound.
𐑐	p		
𐑚	b		
𐑑	t		
𐑛	d		
𐑗	che	as in	*cheese.*
𐑜	g		
𐑒	k		
𐑜𐑨	ga	as in	*gate.*
𐑓	f		
𐑝	v		
𐑞	eth	as in	*thigh.*
𐑔	the	"	*thy*
𐑕	s		
𐑟	z		
𐑖	esh	as in	*flesh.*
𐑠	zhe	"	vision.
𐑻	ur	"	*burn.*
𐑤	l		
𐑥	m		
𐑯	n		
𐑙	eng	as in	*length.*

No. 20 – Japanese kana writing (Smith 1996: 211)

あ	い	う	え	お
ア	イ	ウ	エ	オ
か	き	く	け	こ
カ	キ	ク	ケ	コ
が	ぎ	ぐ	げ	ご
ガ	ギ	グ	ゲ	ゴ
さ	し	す	せ	そ
サ	シ	ス	セ	ソ
ざ	じ	ず	ぜ	ぞ
ザ	ジ	ズ	ゼ	ゾ
た	ち	つ	て	と
タ	チ	ツ	テ	ト
だ	ぢ	づ	で	ど
ダ	ヂ	ヅ	デ	ド
な	に	ぬ	ね	の
ナ	ニ	ヌ	ネ	ノ
は	ひ	ふ	へ	ほ
ハ	ヒ	フ	ヘ	ホ
ば	び	ぶ	べ	ぼ
バ	ビ	ブ	ベ	ボ
ぱ	ぴ	ぷ	ぺ	ぽ
パ	ピ	プ	ペ	ポ
ま	み	む	め	も
マ	ミ	ム	メ	モ
や		ゆ		よ
ヤ		ユ		ヨ
ら	り	る	れ	ろ
ラ	リ	ル	レ	ロ
わ				を
ワ				ヲ

Hiragana: first line and every second following one

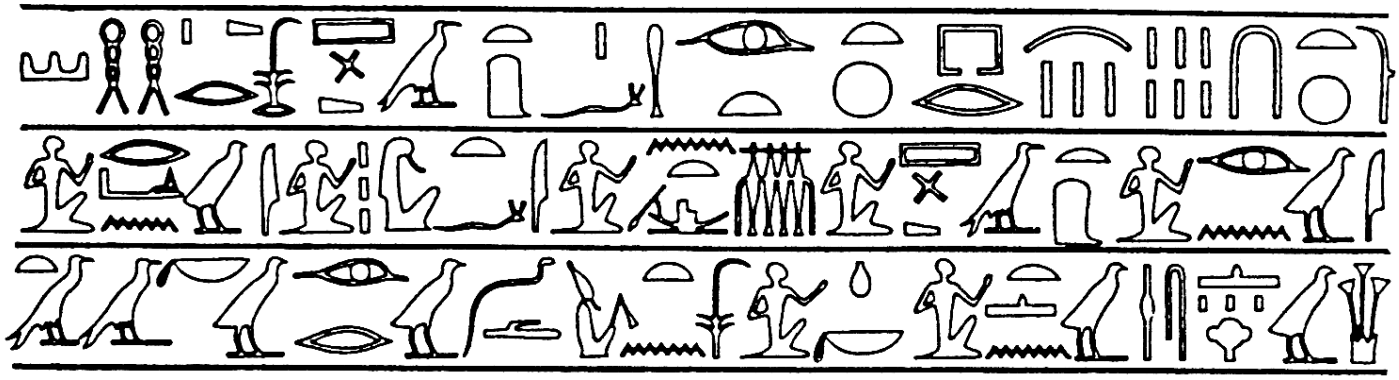
Katakana: second line and every second following one

No. 21 – Hangul (King 1996: 224)

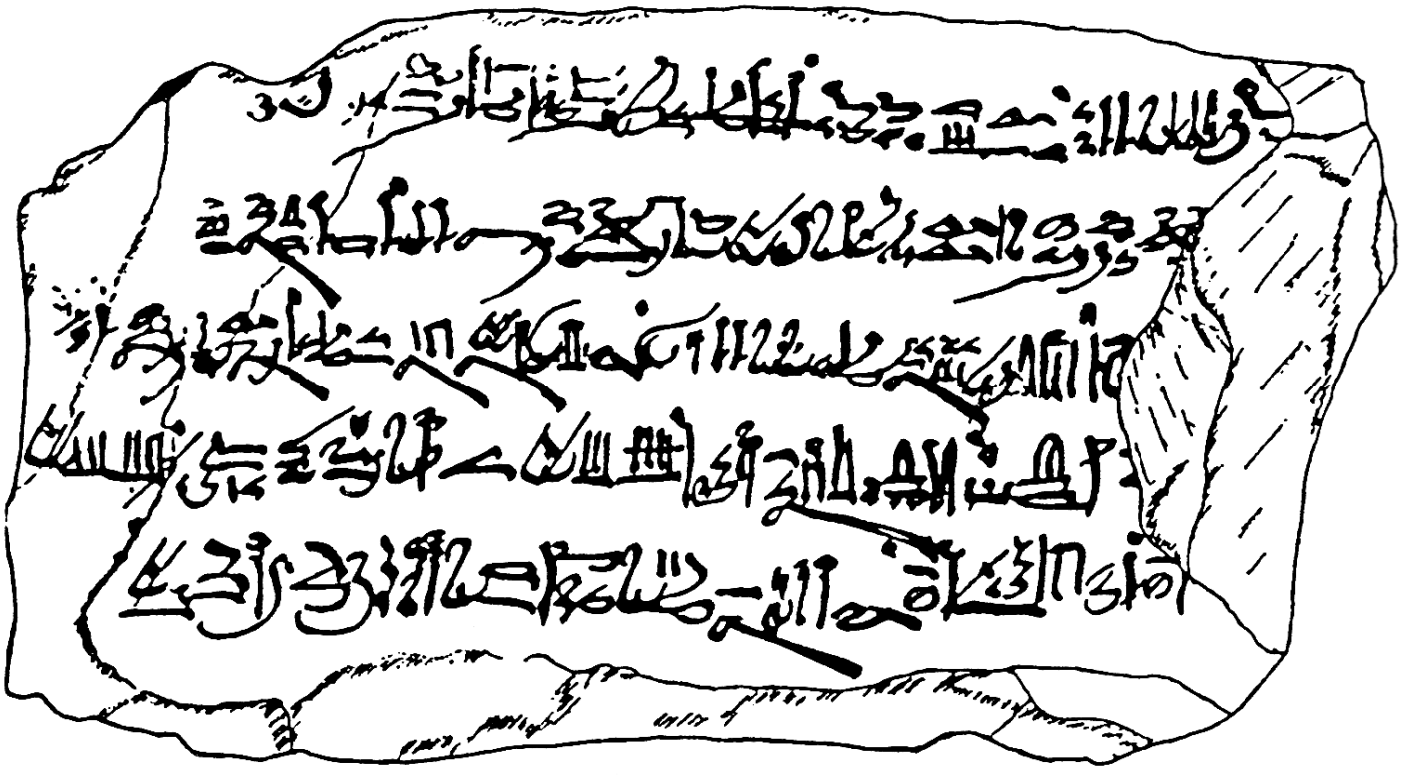
ㄱ 오
ㄲ 요
ㄴ 와
ㄷ 왜
ㄸ 외
ㄹ 우
ㅁ 워
ㅂ 웨
ㅃ 위
ㅅ 유
ㅆ 으
ㅇ 의
아 이
애 ㅈ
야 ㅉ
얘 ㅊ
어 ㅋ
에 ㅌ
여 ㅍ
예 ㅎ

No. 22 – Egyptian writing (Haarmann 1991: 104, 105)

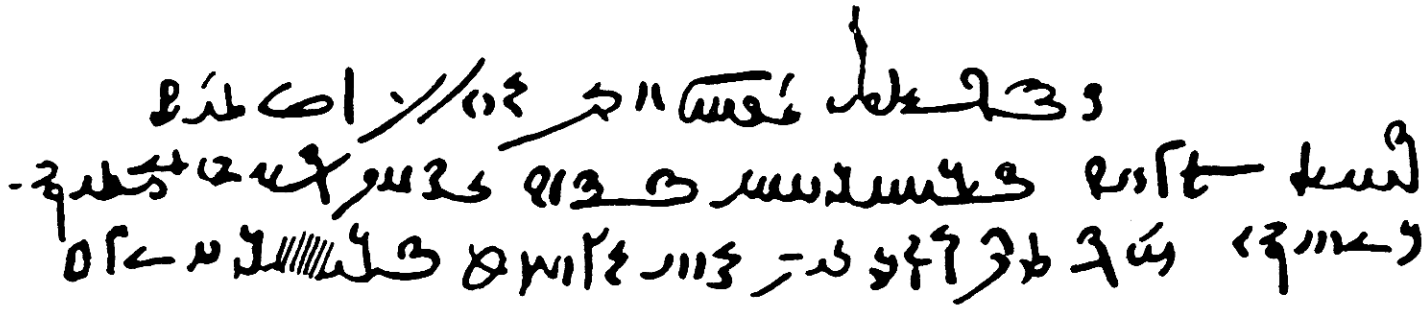
- Hieroglyphs
- Hieratic
- Demotic



Hieroglyphs



Hieratic

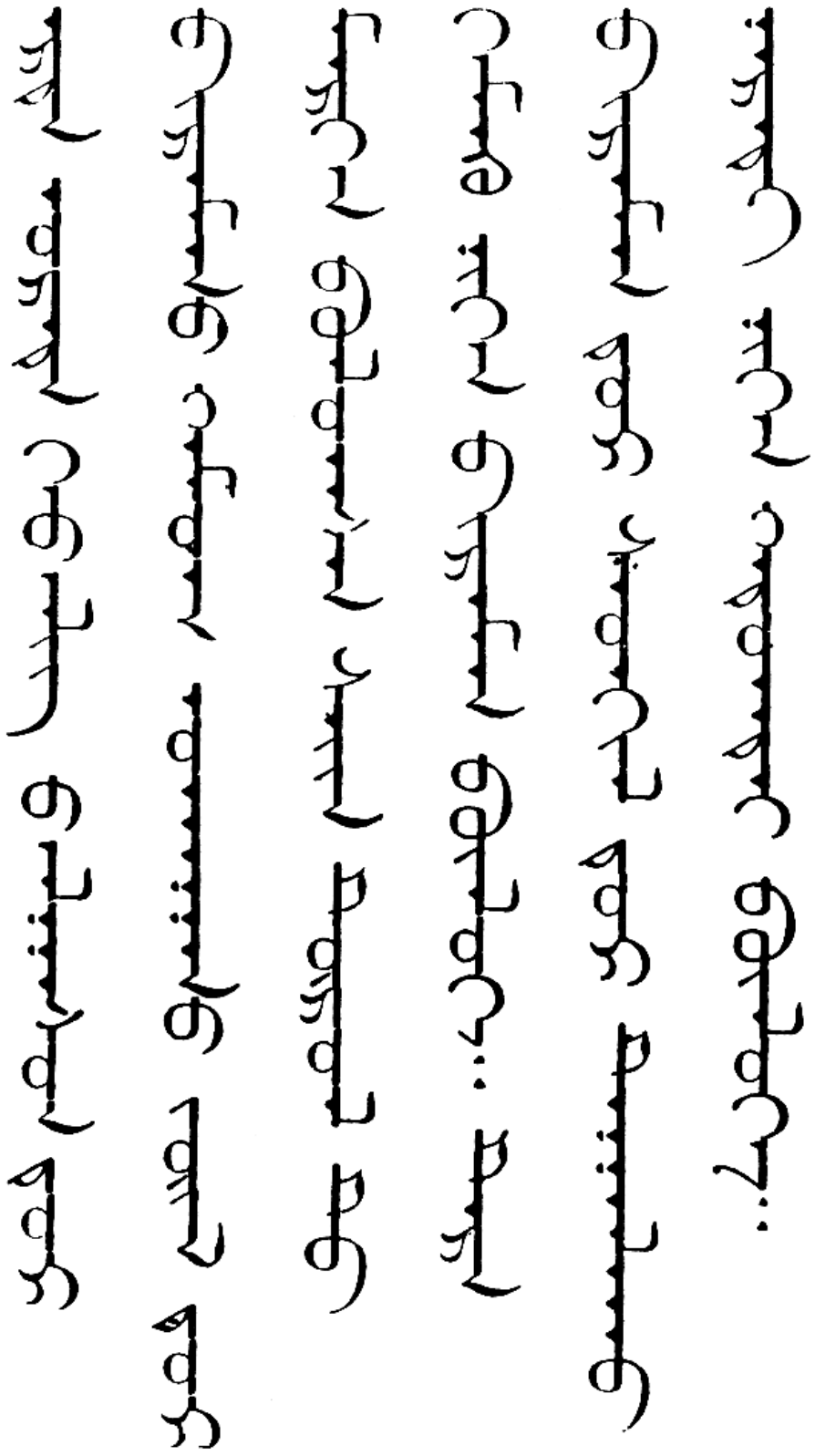


Demotic

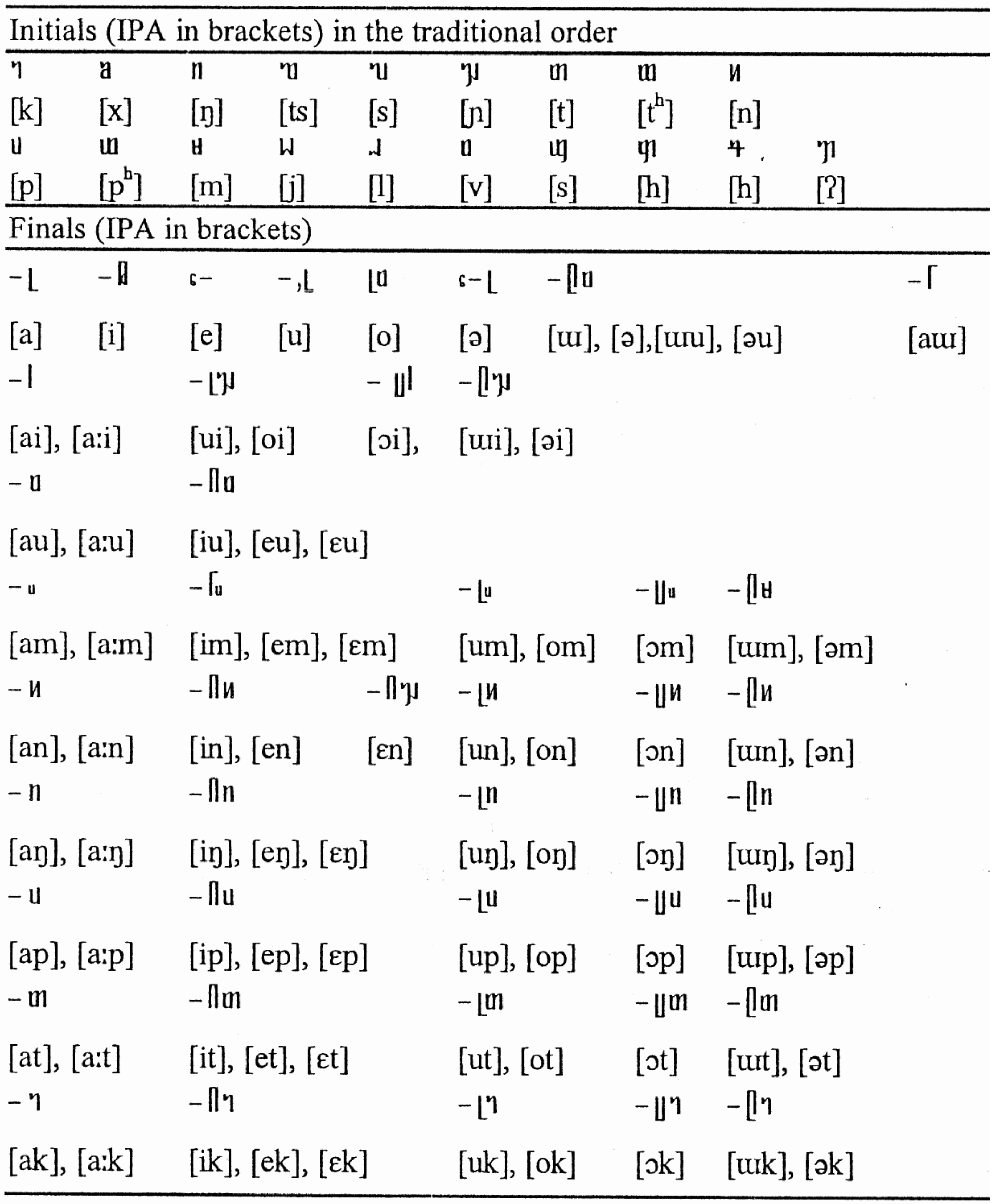
Hieroglyphs					Hieroglyphic book-script	Hieratic			Demotic
2900–2800 B.C.	2700–2600 B.C.	2000–1800 B.C.	*c.* 1500 B.C.	500–100 B.C.	*c.* 1500 B.C.	*c.* 1900 B.C.	*c.* 1300 B.C.	*c.* 200 B.C.	400–100 B.C.

Evolution of the Egyptian scripts

No. 23 – Mongolian script (Haarmann 1991: 512)



No. 24 – Dehong Dai: Tainüa writing (Zhou 2003: 336-341)



Initials (IPA in brackets) in the traditional order									
[k]	[x]	[ŋ]	[ts]	[s]	[ɲ]	[t]	[tʰ]	[n]	
[p]	[pʰ]	[m]	[j]	[l]	[v]	[s]	[h]	[h]	[ʔ]

Finals (IPA in brackets)							
[a]	[i]	[e]	[u]	[o]	[ə]	[ɯ], [ə],[ɯu], [əu]	[aɯ]
[ai], [a:i]		[ui], [oi]		[ɔi],	[ɯi], [əi]		
[au], [a:u]		[iu], [eu], [ɛu]					
[am], [a:m]		[im], [em], [ɛm]			[um], [om]	[ɔm]	[ɯm], [əm]
[an], [a:n]		[in], [en]		[ɛn]	[un], [on]	[ɔn]	[ɯn], [ən]
[aŋ], [a:ŋ]		[iŋ], [eŋ], [ɛŋ]			[uŋ], [oŋ]	[ɔŋ]	[ɯŋ], [əŋ]
[ap], [a:p]		[ip], [ep], [ɛp]			[up], [op]	[ɔp]	[ɯp], [əp]
[at], [a:t]		[it], [et], [ɛt]			[ut], [ot]	[ɔt]	[ɯt], [ət]
[ak], [a:k]		[ik], [ek], [ɛk]			[uk], [ok]	[ɔk]	[ɯk], [ək]

Traditional Tainüa script

Table 85. The first reformed Tainüa writing system in Dehong (1954)

Captial initials (IPA in brackets)										
ᥐ	ᥑ	ᥒ	ᥓ	ᥔ	ᥕ	ᥖ	ᥗ	ᥢ		
[k]	[x]	[ŋ]	[ts]	[s]	[ɲ]	[t]	[tʰ]	[n]		
ᥙ	ᥚ	ᥛ	ᥕ	ᥘ	ᥝ	ᥜ	ᥡ	ᥞ	ᥠ	ᥟ
[p]	[pʰ]	[m]	[j]	[l]	[v]	[f]	[tsh]	[h]	[h]	[ʔ]
Small initials (IPA in brackets)										
ၵ	ၶ	င	ၸ	သ	ၺ	တ	ထ	ၼ		
[k]	[x]	[ŋ]	[ts]	[s]	[ɲ]	[t]	[tʰ]	[n]		
ပ	ၽ	မ	ယ	လ	ဝ	ၾ	ၹ	ႁ	ႁ	ဢ
[p]	[pʰ]	[m]	[j]	[l]	[v]	[f]	[tsh]	[h]	[h]	[ʔ]
Finals (IPA in brackets)										
ᥣ		ᥤ	ᥥ	ᥦ	ᥧ	ᥨ	ᥩ	ᥪ	ᥫ	ᥬ
[a]		[i]	[e]	[ia]	[u]	[o]	[ua]	[ɯ]	[ə]	[aɯ]
–ᥕ	ᥣᥕ				ᥧᥕ	ᥨᥕ	ᥩᥕ	ᥪᥕ	ᥫᥕ	
[ai]	[a:i]				[ui]	[oi]	[uai]	[ɯi]	[əi]	
–ᥝ	ᥣᥝ	ᥤᥝ	ᥥᥝ	ᥦᥝ				ᥪᥝ	ᥫᥝ	
[au]	[a:u]	[iu]	[eu]	[ɛu]				[ɯu]	[əu]	
–ᥛ	ᥣᥛ	ᥤᥛ	ᥥᥛ	ᥦᥛ	ᥧᥛ	ᥨᥛ	ᥩᥛ	ᥪᥛ	ᥫᥛ	
[am]	[a:m]	[im]	[em]	[iam]	[um]	[om]	[uam]	[ɯm]	[əm]	
–ᥢ	ᥣᥢ	ᥤᥢ	ᥥᥢ	ᥦᥢ	ᥧᥢ	ᥨᥢ	ᥩᥢ	ᥪᥢ	ᥫᥢ	
[an]	[a:n]	[in]	[en]	[ian]	[un]	[on]	[uan]	[ɯn]	[ən]	
–ᥒ	ᥣᥒ	ᥤᥒ	ᥥᥒ	ᥦᥒ	ᥧᥒ	ᥨᥒ	ᥩᥒ	ᥪᥒ	ᥫᥒ	
[aŋ]	[a:ŋ]	[iŋ]	[eŋ]	[iaŋ]	[uŋ]	[oŋ]	[uaŋ]	[ɯŋ]	[əŋ]	
–ᥙ	ᥣᥙ	ᥤᥙ	ᥥᥙ	ᥦᥙ	ᥧᥙ	ᥨᥙ	ᥩᥙ	ᥪᥙ	ᥫᥙ	
[ap]	[a:p]	[ip]	[ep]	[iap]	[up]	[op]	[uap]	[ɯp]	[əp]	
–ᥖ	ᥣᥖ	ᥤᥖ	ᥥᥖ	ᥦᥖ	ᥧᥖ	ᥨᥖ	ᥩᥖ	ᥪᥖ	ᥫᥖ	
[at]	[a:t]	[it]	[et]	[iat]	[ut]	[ot]	[uat]	[ɯt]	[ət]	
–ᥐ	ᥣᥐ	ᥤᥐ	ᥥᥐ	ᥦᥐ	ᥧᥐ	ᥨᥐ	ᥩᥐ	ᥪᥐ	ᥫᥐ	
[ak]	[a:k]	[ik]	[ek]	[iak]	[uk]	[ok]	[uak]	[ɯk]	[ək]	

Tones					
>	:	v	`	+	´
Mid-level	Hi-level	Lo-level	Mid-fall	Hi-fall	Mid-rise

Tainüa script after first reform (1954)

Initials (IPA in brackets)								
ㄱ	ㅎ	ㅇ	ㅊ	ㅅ	ㅈ	ㄷ	ㅌ	ㄹ
[k]	[x]	[ŋ]	[ts]	[s]	[j]	[t]	[t^h]	[l]
ㅂ	ㅍ	ㅁ	ㅍㅈ	ㅂ	ㅎㅣ	ㅎㅣ		
[p]	[p^h]	[m]	[f]	[v]	[h]	[ʔ]		

Finals (IPA in brackets)										
ㅣ		ㅐ	ㅔ	ㅢ	ㅜ	ㅗ	ㅘㅗ	ㅞㅡ	ㅐㅡ	ㄱ
[a]		[i]	[e]	[ɛ],[ia]	[u]	[o]	[ɔ], [ua]	[ɯ]	[ə]	[aɯ]
-ㅎㅣ	ㅣㅎㅣ				ㅜㅎㅣ	ㅗㅎㅣ	ㅘㅎㅣ	ㅞㅎㅣ	ㅐㅎㅣ	
[ai]	[a:i]				[ui]	[oi]	[ɔi]	[ɯi]	[əi]	
-ㅇ	ㅣㅇ	ㅐㅇ	ㅔㅇ	ㅢㅇ				ㅞㅇ	ㅐㅇ	
[au]	[a:u]	[iu]	[eu]	[ɛu]				[ɯu]	[əu]	
-ㅂ	ㅣㅂ	ㅐㅂ	ㅔㅂ	ㅢㅂ	ㅜㅂ	ㅗㅂ	ㅘㅂ	ㅞㅂ	ㅐㅂ	
[am]	[a:m]	[im]	[em]	[ɛm]	[um]	[om]	[ɔm]	[ɯm]	[əm]	
-ㅁ	ㅣㅁ	ㅐㅁ	ㅔㅁ	ㅢㅁ	ㅜㅁ	ㅗㅁ	ㅘㅁ	ㅞㅁ	ㅐㅁ	
[an]	[a:n]	[in]	[en]	[ɛn]	[un]	[on]	[ɔn]	[ɯn]	[ən]	
-ㄴ	ㅣㄴ	ㅐㄴ	ㅔㄴ	ㅢㄴ	ㅜㄴ	ㅗㄴ	ㅘㄴ	ㅞㄴ	ㅐㄴ	
[aŋ]	[a:ŋ]	[iŋ]	[eŋ]	[ɛŋ]	[uŋ]	[oŋ]	[ɔŋ]	[ɯŋ]	[əŋ]	
-ㅇ	ㅣㅇ	ㅐㅇ	ㅔㅇ	ㅢㅇ	ㅜㅇ	ㅗㅇ	ㅘㅇ	ㅞㅇ	ㅐㅇ	
[ap]	[a:p]	[ip]	[ep]	[ɛp]	[up]	[op]	[ɔp]	[ɯp]	[əp]	
-ㅁ	ㅣㅁ	ㅐㅁ	ㅔㅁ	ㅢㅁ	ㅜㅁ	ㅗㅁ	ㅘㅁ	ㅞㅁ	ㅐㅁ	
[at]	[a:t]	[it]	[et]	[ɛt]	[ut]	[ot]	[ɔt]	[ɯt]	[ət]	
-ㄱ	ㅣㄱ	ㅐㄱ	ㅔㄱ	ㅢㄱ	ㅜㄱ	ㅗㄱ	ㅘㄱ	ㅞㄱ	ㅐㄱ	
[ak]	[a:k]	[ik]	[ek]	[ɛk]	[uk]	[ok]	[ɔk]	[ɯk]	[ək]	

Tones					
unmarked	r	e	a	v	c
Mid-level	Hi-level	Lo-level	Mid-fall	Hi-fall	Mid-rise

Tainüa script after second reform (1956)

Initials (IPA in brackets)									
ᥐ	ᥑ	ᥒ	ᥓ	ᥔ	ᥕ	ᥖ	ᥗ	ᥘ	
[k]	[x]	[ŋ]	[ts]	[s]	[j]	[t]	[tʰ]	[l]	
ᥙ	ᥚ	ᥛ	ᥜ	ᥝ	ᥞ	ᥟ	ᥠ	ᥡ	ᥢ
[p]	[pʰ]	[m]	[f]	[v]	[h]	[ʔ]	[kʰ]	[tsʰ]	[n]

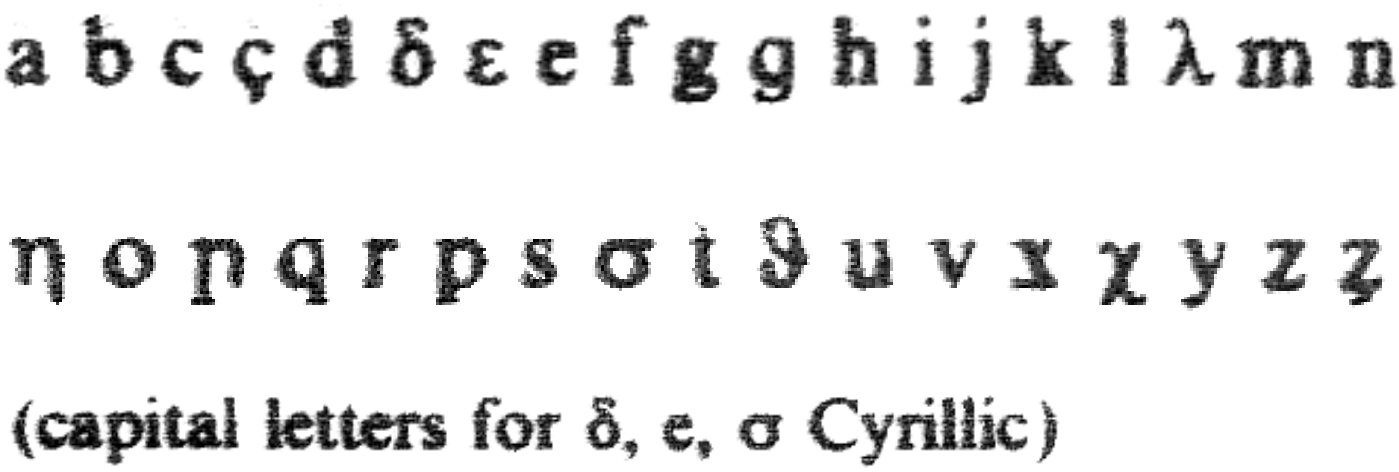
Finals (IPA in brackets)										
ᥣ		ᥤ	ᥥ	ᥦ	ᥧ	ᥨ	ᥩ	ᥪ	ᥫ	ᥬ
[a]		[i]	[e]	[ɛ],[ia]	[u]	[o]	[ɔ], [ua]	[ɯ]	[ə]	[aɯ]
ᥭ	ᥣᥭ				ᥧᥭ	ᥨᥭ	ᥩᥭ	ᥪᥭ	ᥫᥭ	
[ai]	[a:i]				[ui]	[oi]	[ɔi]	[ɯi]	[əi]	
– ᥝ	ᥣᥝ	ᥤᥝ	ᥥᥝ	ᥦᥝ				ᥪᥝ	ᥫᥝ	
[au]	[a:u]	[iu]	[eu]	[ɛu]				[ɯu]	[əu]	
– ᥛ	ᥣᥛ	ᥤᥛ	ᥥᥛ	ᥦᥛ	ᥧᥛ	ᥨᥛ	ᥩᥛ	ᥪᥛ	ᥫᥛ	
[am]	[a:m]	[im]	[em]	[ɛm]	[um]	[om]	[ɔm]	[ɯm]	[əm]	
– ᥢ	ᥣᥢ	ᥤᥢ	ᥥᥢ	ᥦᥢ	ᥧᥢ	ᥨᥢ	ᥩᥢ	ᥪᥢ	ᥫᥢ	
[an]	[a:n]	[in]	[en]	[ɛn]	[un]	[on]	[ɔn]	[ɯn]	[ən]	
– ᥒ	ᥣᥒ	ᥤᥒ	ᥥᥒ	ᥦᥒ	ᥧᥒ	ᥨᥒ	ᥩᥒ	ᥪᥒ	ᥫᥒ	
[aŋ]	[a:ŋ]	[iŋ]	[eŋ]	[ɛŋ]	[uŋ]	[oŋ]	[ɔŋ]	[ɯŋ]	[əŋ]	
– ᥙ	ᥣᥙ	ᥤᥙ	ᥥᥙ	ᥦᥙ	ᥧᥙ	ᥨᥙ	ᥩᥙ	ᥪᥙ	ᥫᥙ	
[ap]	[a:p]	[ip]	[ep]	[ɛp]	[up]	[op]	[ɔp]	[ɯp]	[əp]	
– ᥖ	ᥣᥖ	ᥤᥖ	ᥥᥖ	ᥦᥖ	ᥧᥖ	ᥨᥖ	ᥩᥖ	ᥪᥖ	ᥫᥖ	
[at]	[a:t]	[it]	[et]	[ɛt]	[ut]	[ot]	[ɔt]	[ɯt]	[ət]	
– ᥐ	ᥣᥐ	ᥤᥐ	ᥥᥐ	ᥦᥐ	ᥧᥐ	ᥨᥐ	ᥩᥐ	ᥪᥐ	ᥫᥐ	
[ak]	[a:k]	[ik]	[ek]	[ɛk]	[uk]	[ok]	[ɔk]	[ɯk]	[ək]	

Tones					
unmarked	. .	ˇ	ˋ	.	ˊ
Mid-level	Hi-level	Lo-level	Mid-fall	Hi-fall	Mid-rise

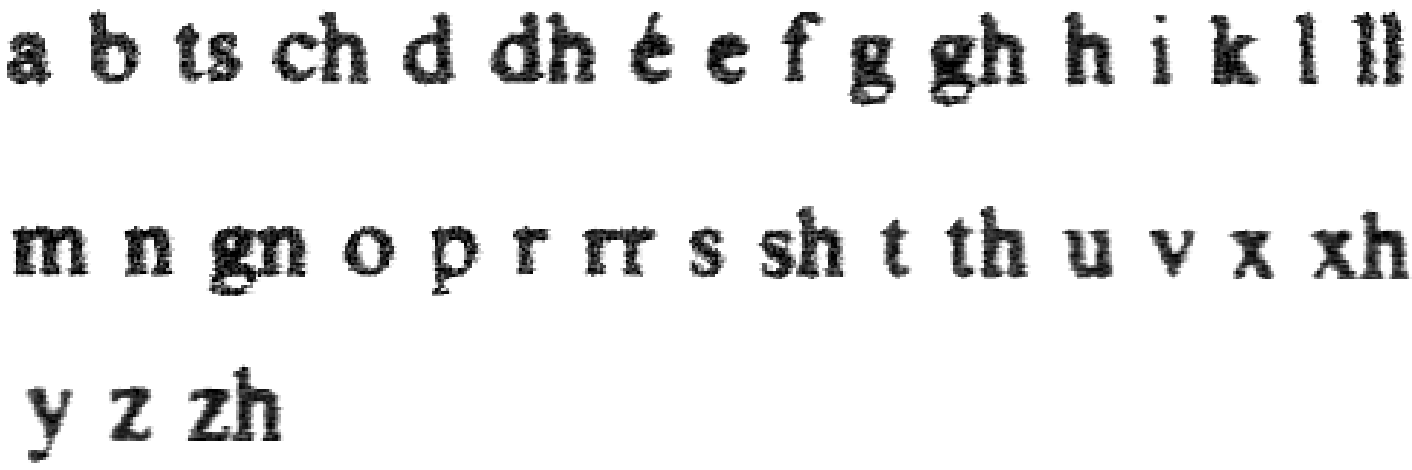
Tainüa script after third reform (1963/64)

No. 25 – Albanian writing

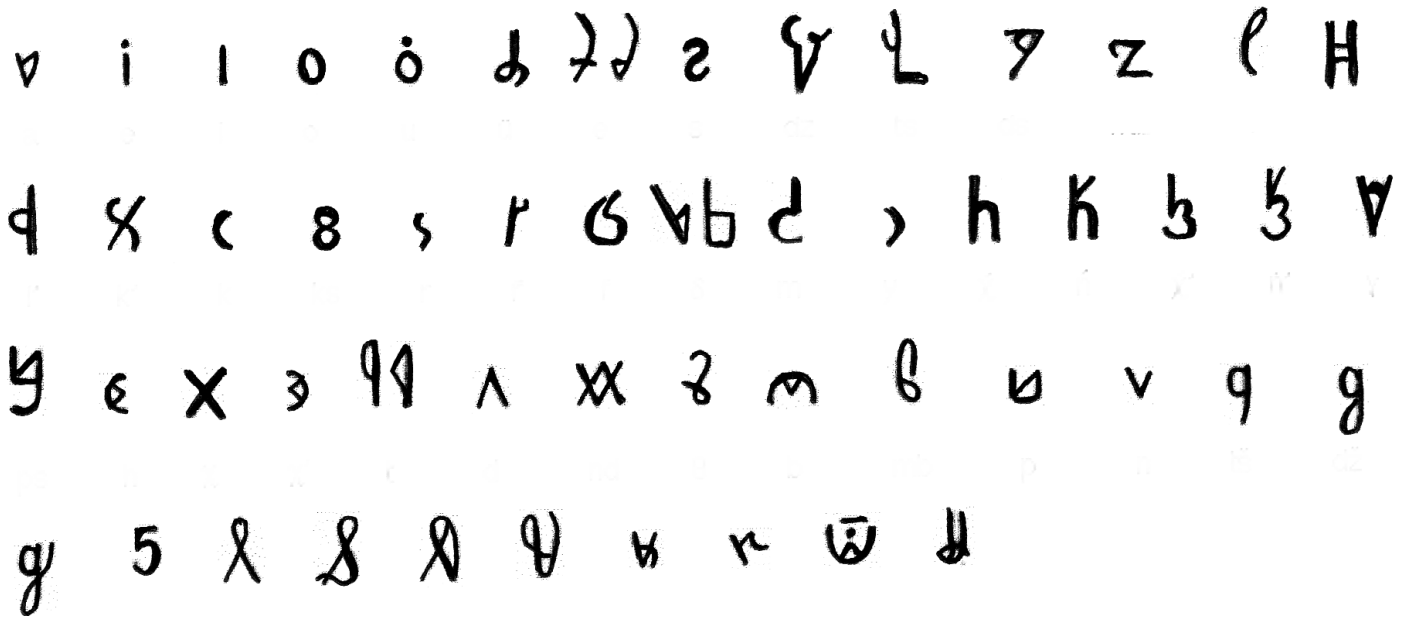
- Stamboul alphabet (Trix 1997: 6)
- Bashkimi alphabet (Trix 1997: 6)
- Elbasan script (Omniglot online source)



Stamboul alphabet



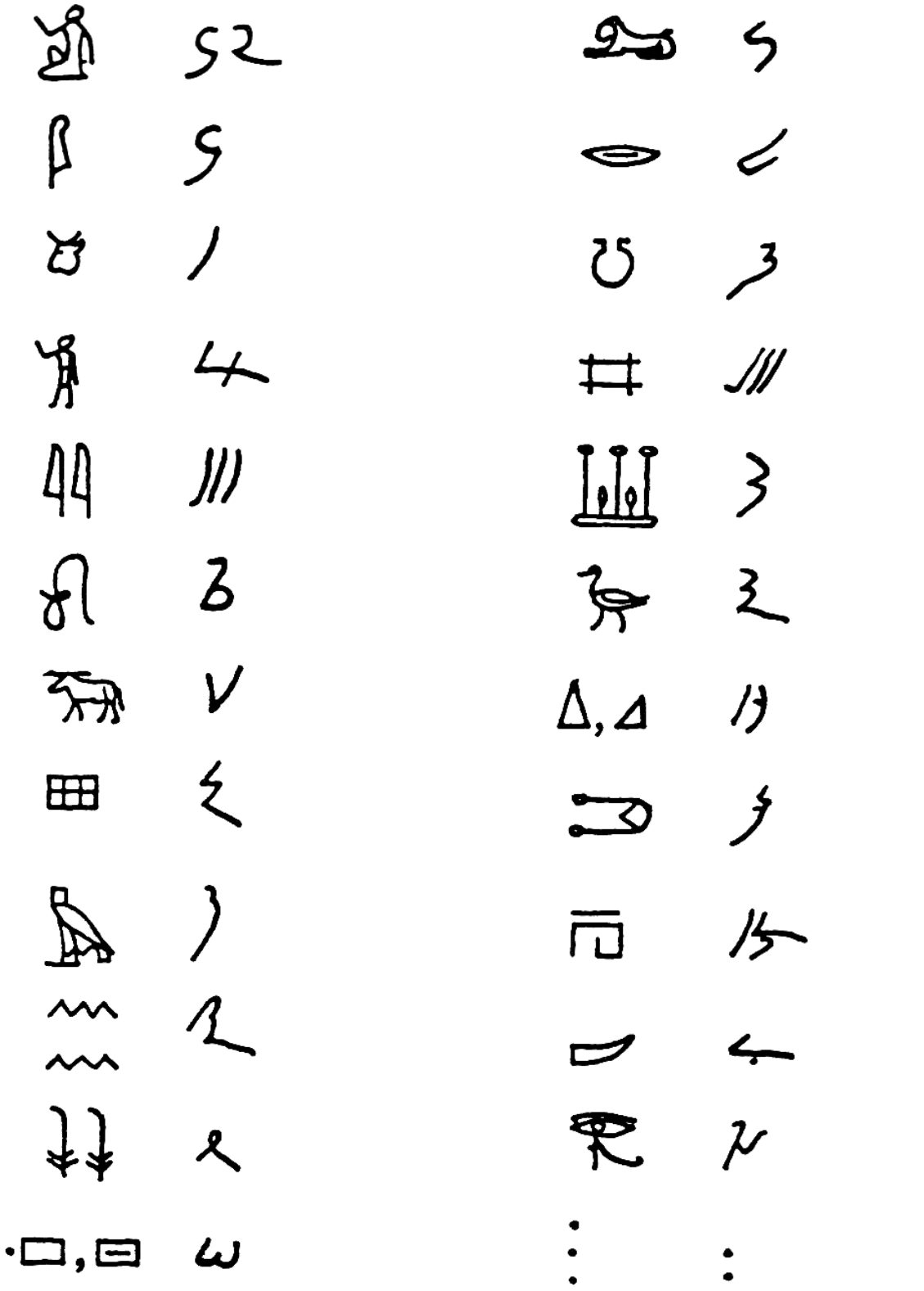
Bashkimi alphabet



Elbasan script

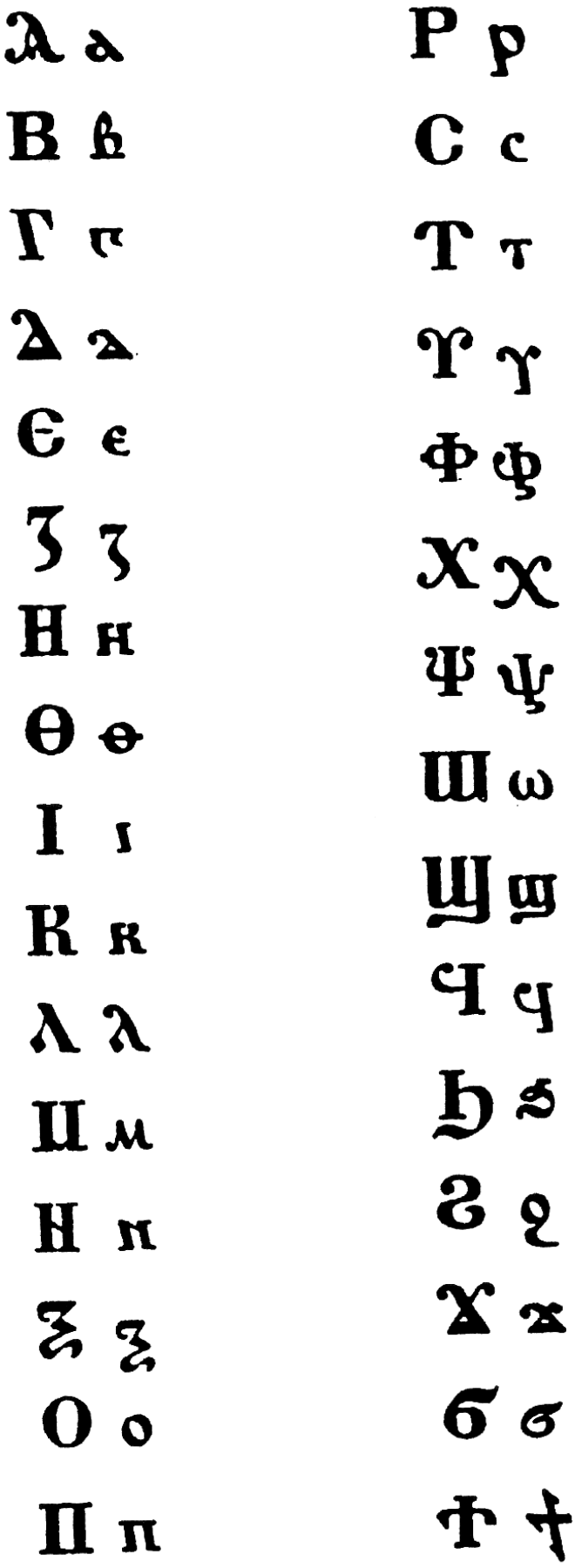
No. 26 – Meroitic script (Haarmann 1991: 390)

- Hieroglyphic
- Demotic



Hieroglyphic Variant	Demotic Variant	Hieroglyphic Variant	Demotic Variant

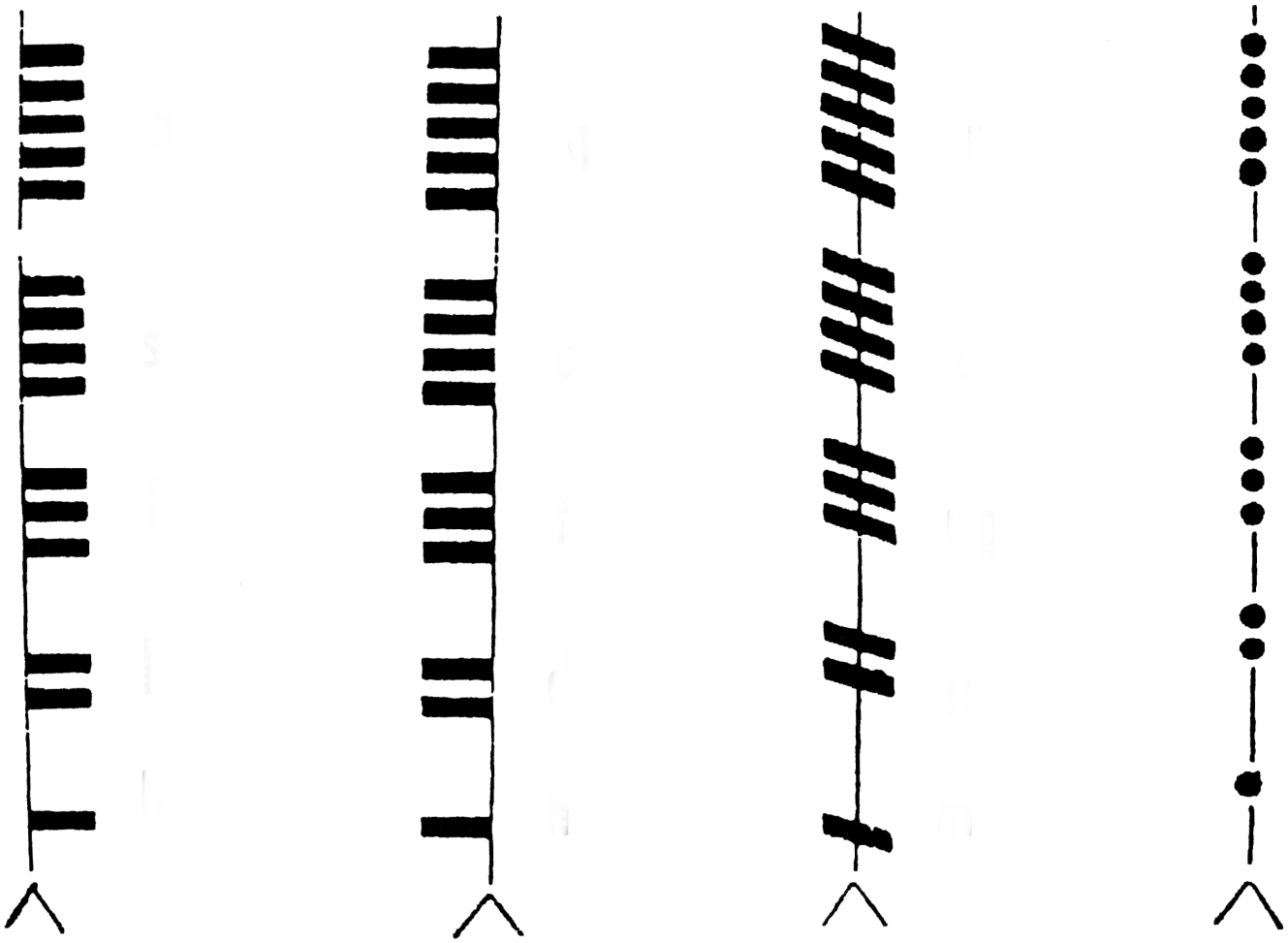
No. 27 – Coptic script (Campbell 1997: 39)



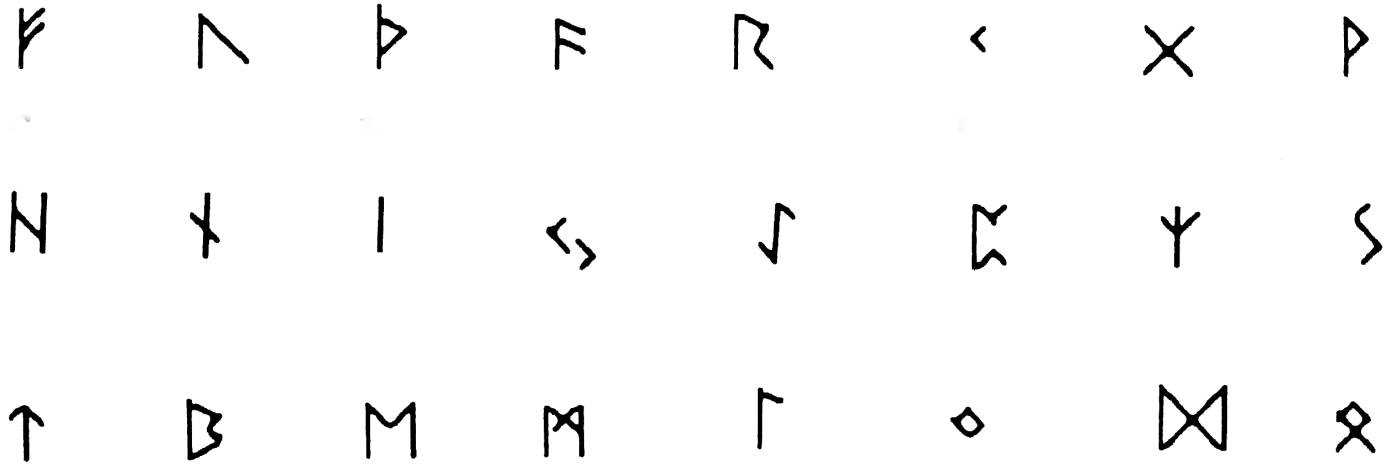
No. 28 – Ol Chiki script (Zide 1996: 613)

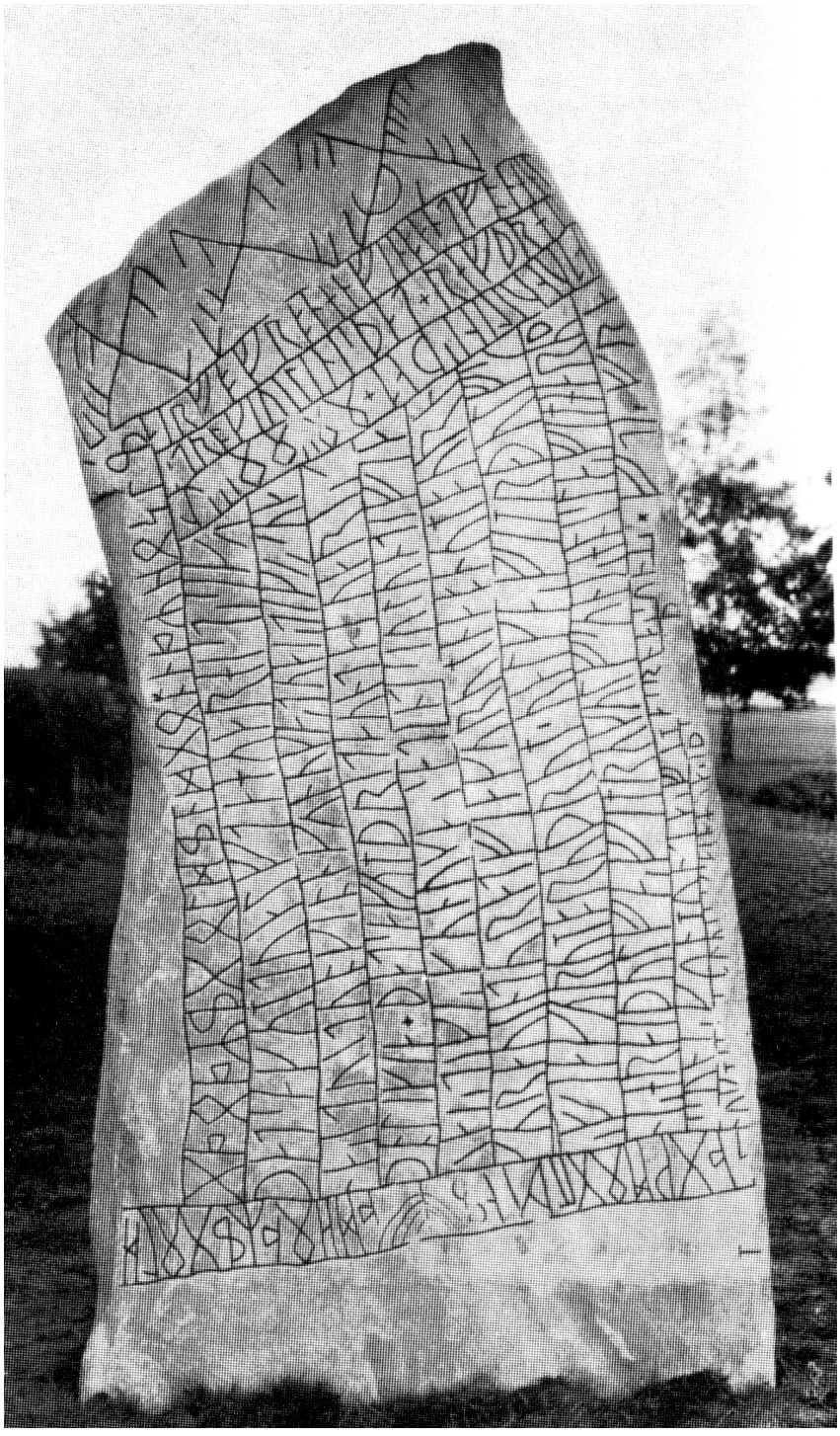
No. 29 – Armenian alphabet (Haarmann 1991: 348)

No. 30 – Ogham (Lehmann 1989: 160)



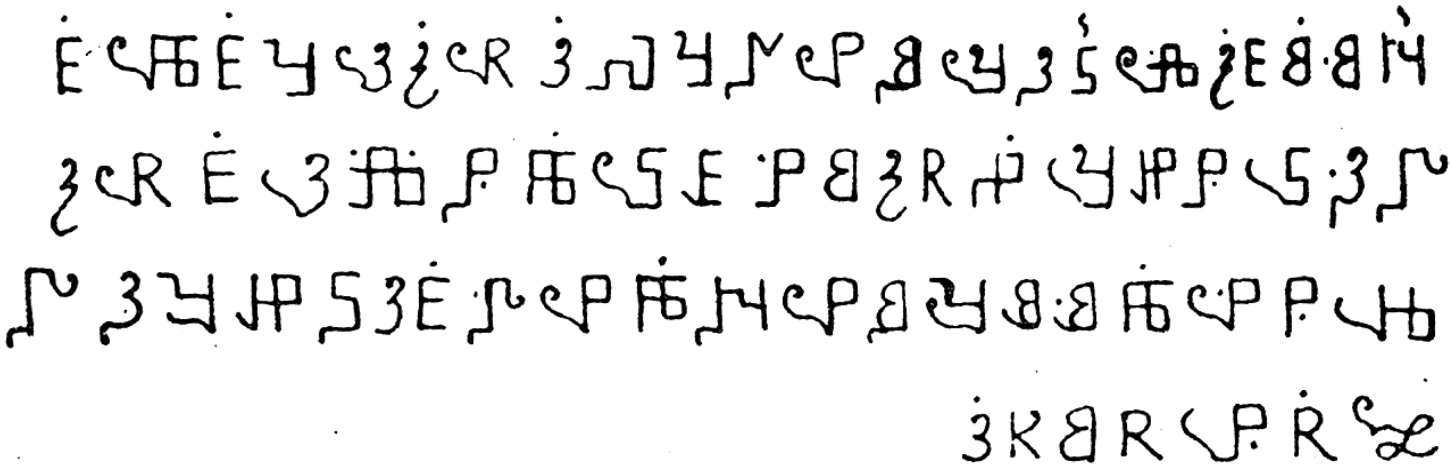
No. 31 – Futhark Runes (Senner 1989: 142; Haarmann 1991: 464)



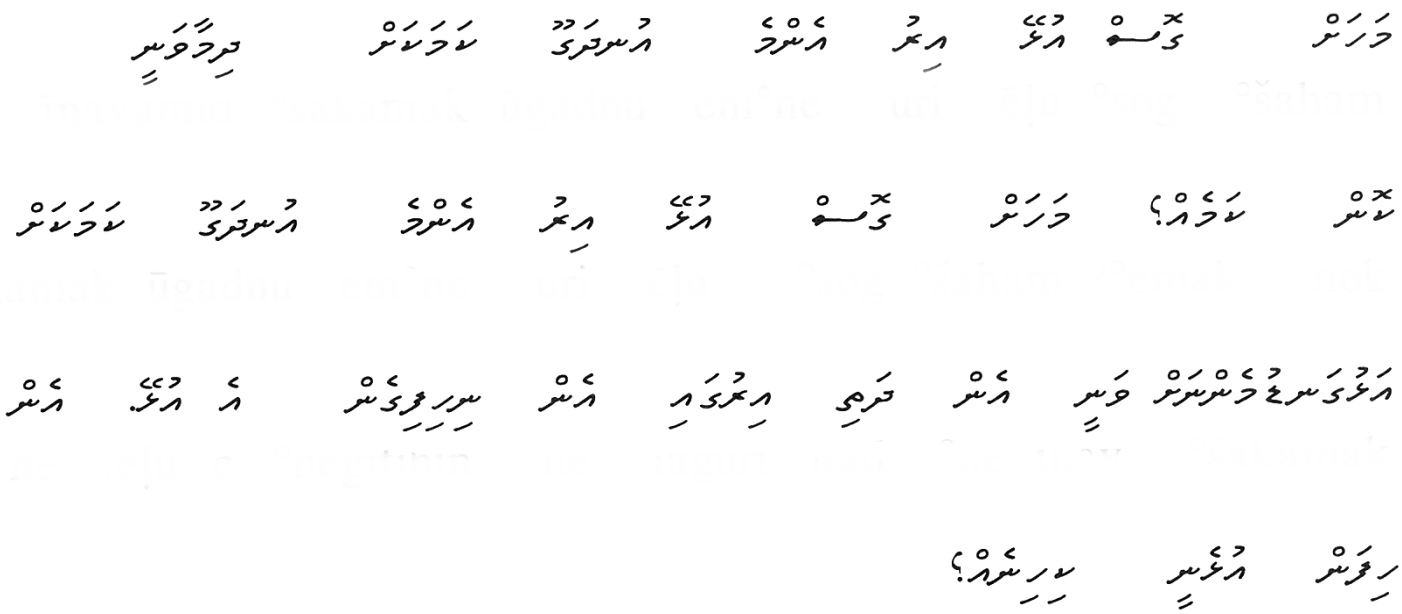


Runes from Sweden (Rök) from the 9th century

No. 32 – Balti script (Jensen 1970: 335)



No. 33 – Dhivehi writing (Gair & Cain 1996: 567)
- Thaana

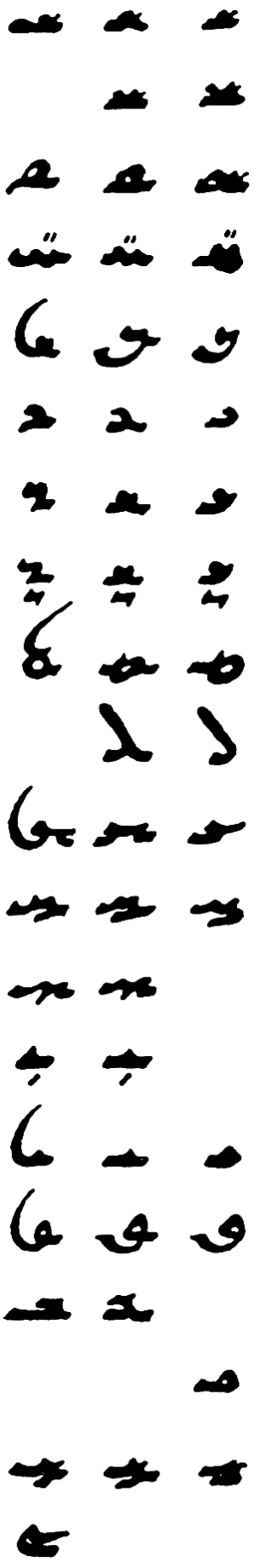


No. 34 – Orkhon Runes (Haarmann 1991: 518)

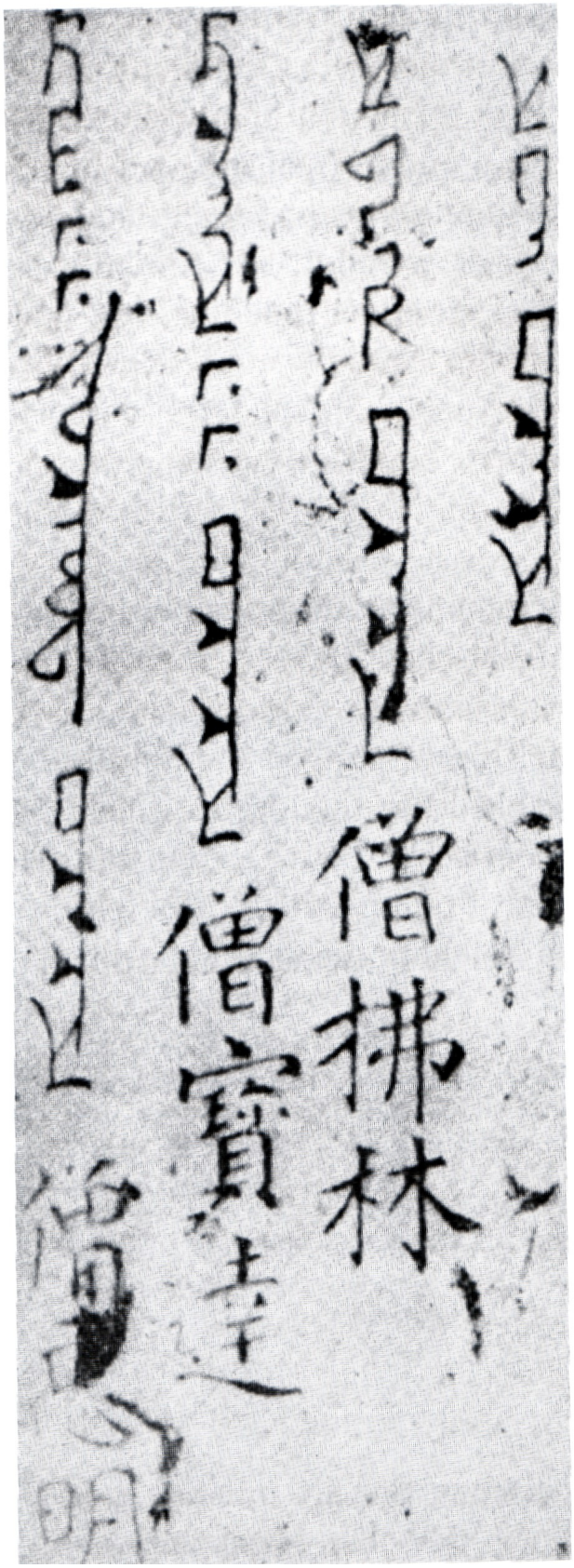
No. 35 – Sogdian script (Haarmann 1991: 506)

(from left to right:

finals, middle letters, initials)



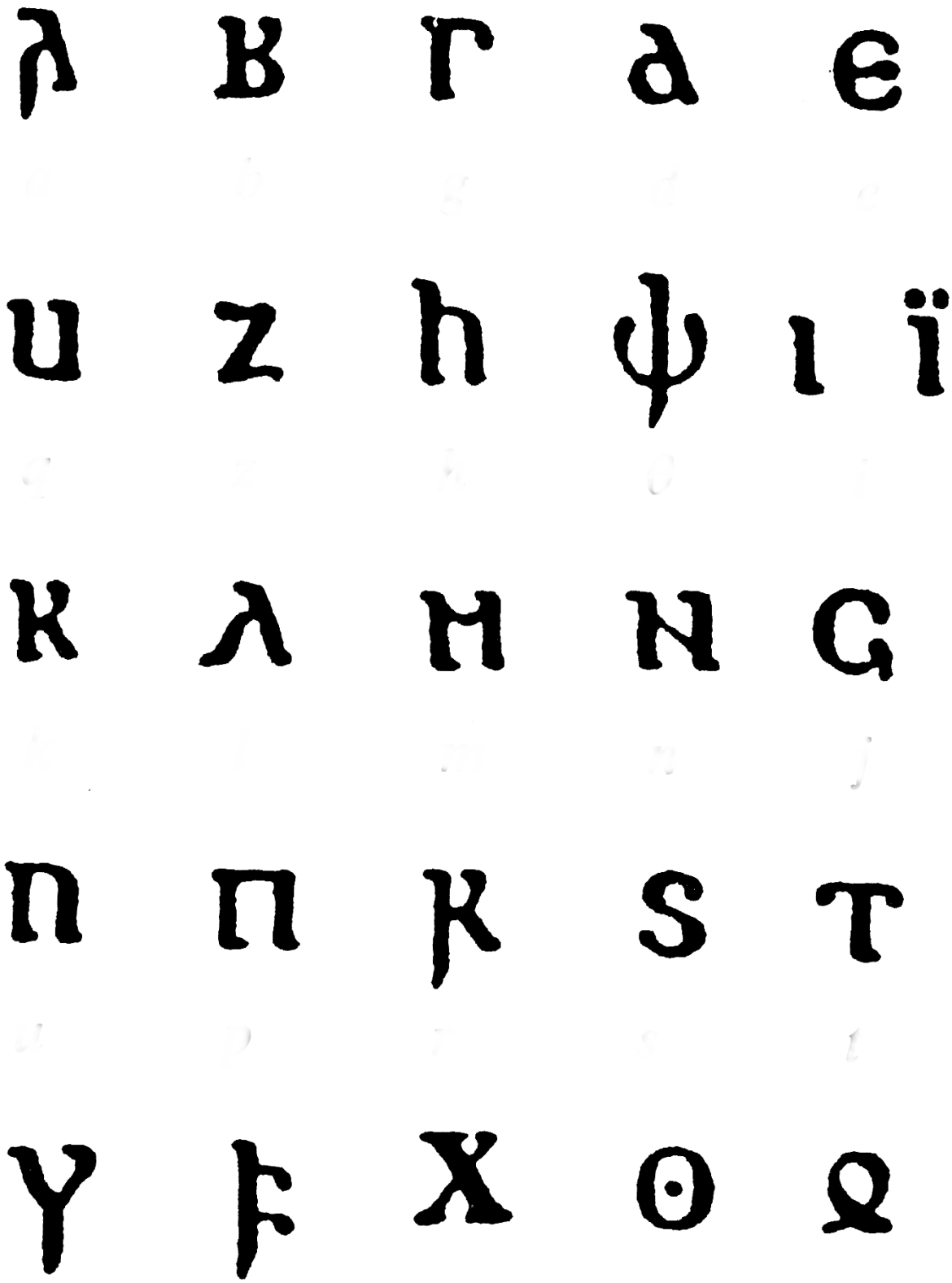
No. 36 – Nestorian inscription (Haarmann 1991: 304)



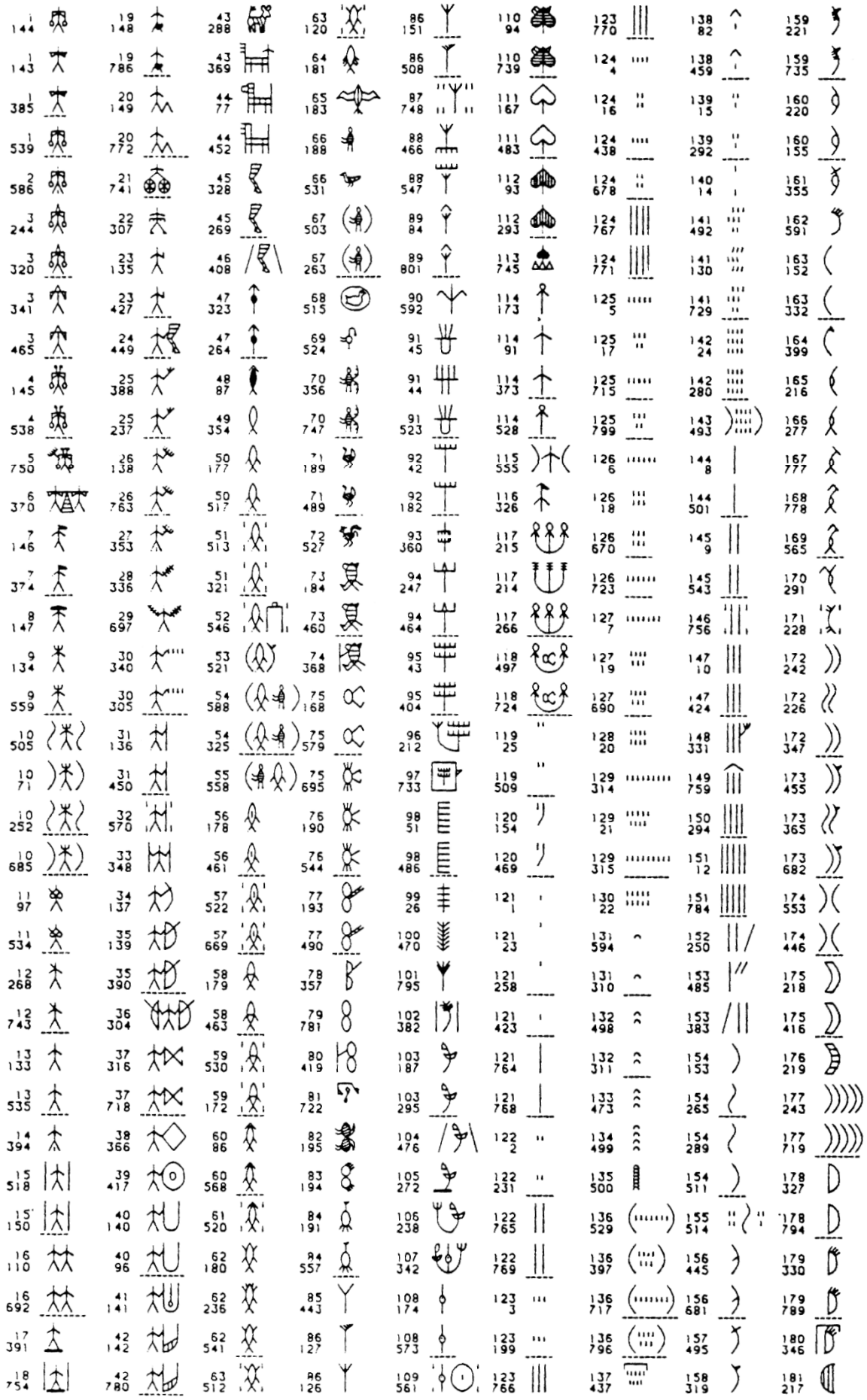
Chinese-Syrian inscription in Nestorian script from the 781 AD (from China)

No. 37 – Rongorongo (Haarmann 1991: 189)

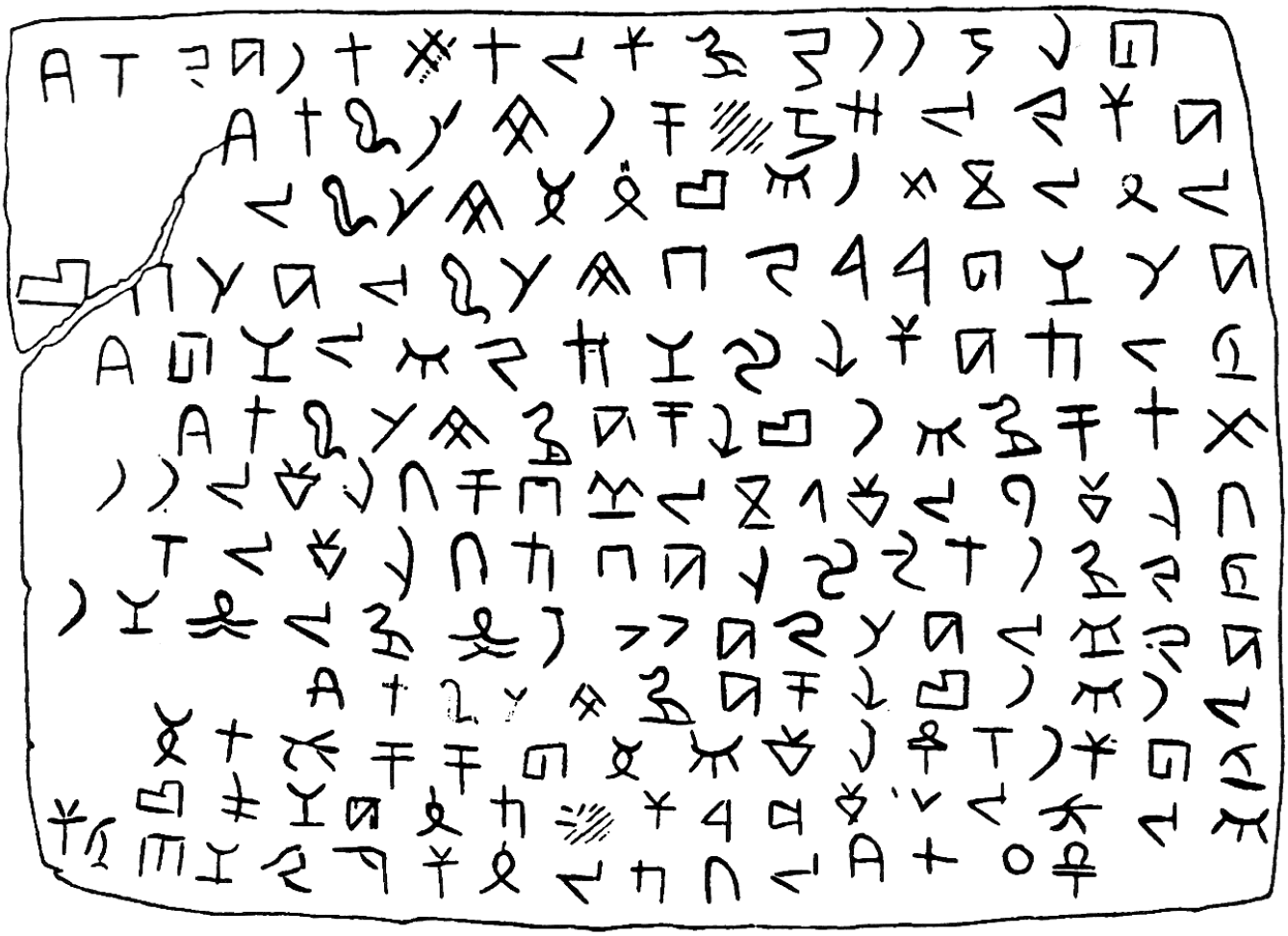
No. 38 – Gothic script (Campbell 1997: 62)



No. 39 - Indus script (Haarmann 1991: 162)
- a small sample of signs



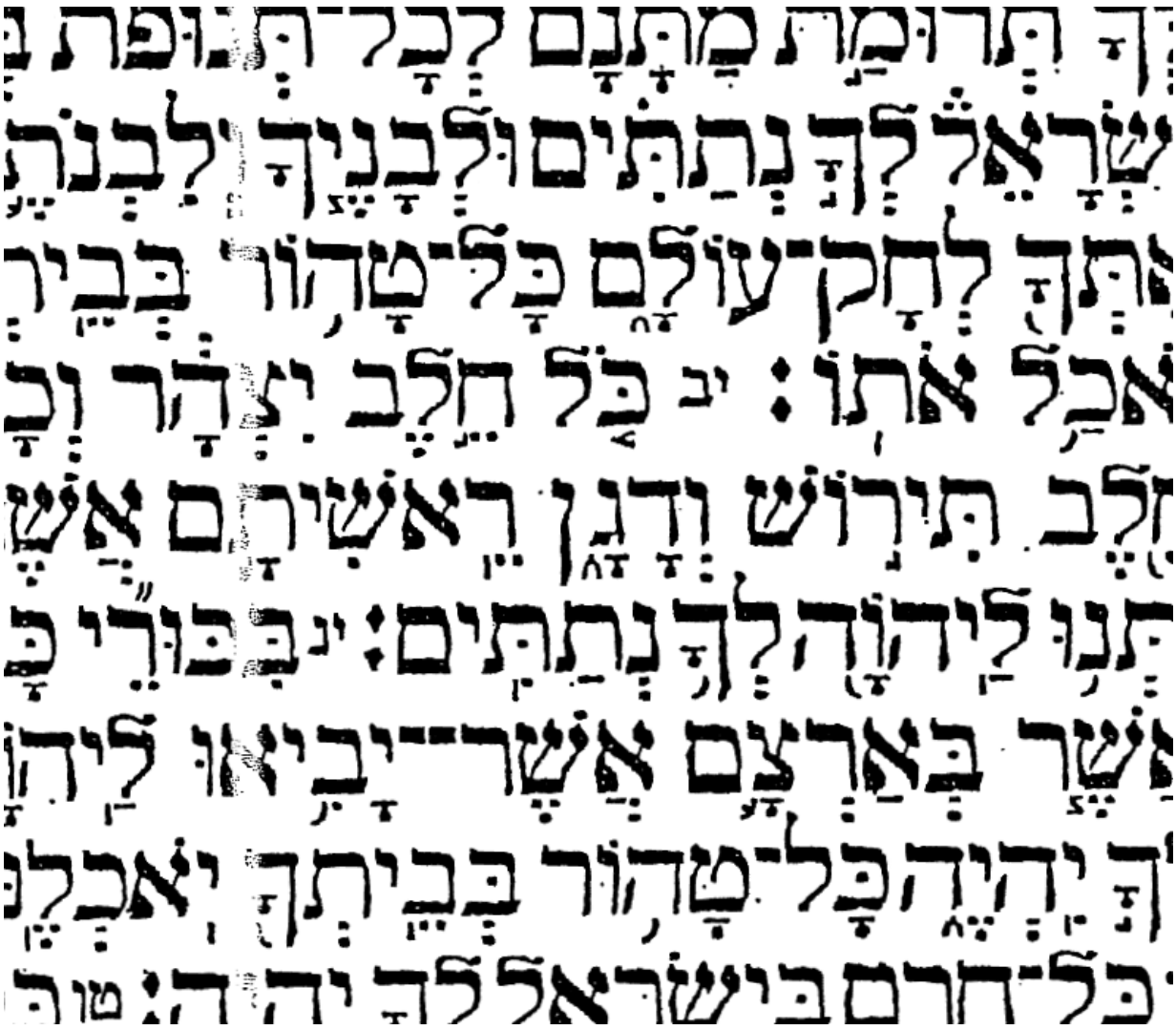
No. 40 – Linear B (Haarmann 1991: 244)



No. 41 – Hebrew letters

- Rashi (Ophir & Avrin 1993: 67)
- Square (Fishman 2001: 30)

Rashi

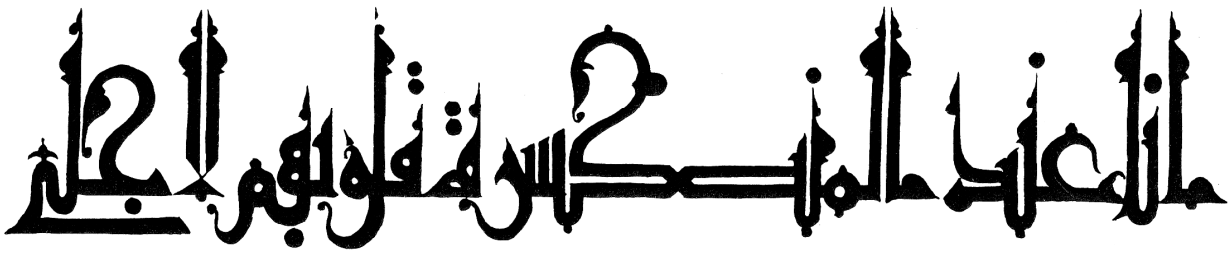


Square

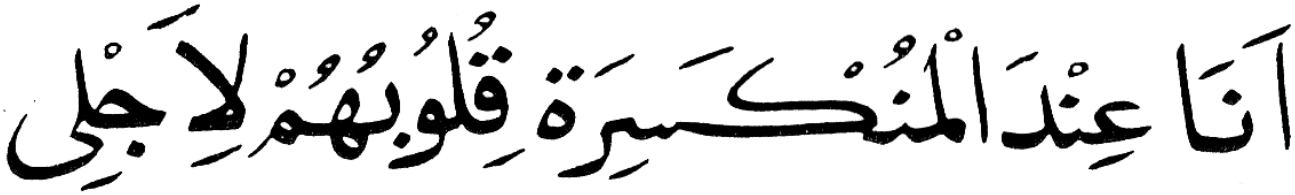
No. 42 – Arabic calligraphy (Zakariya 1979: 18, 25, 30, 31)

- Kufic
- Naskhi
- Nastaliq
- Maghribi

Eastern Kufic



Drawn Kufic



Naskhi

Nastaliq

Maghribi