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## Migrations and language shifts as components of the Slavic spread

**Abstract.** The rapid spread of the Proto-Slavic language in the second half of the first millennium CE was long explained by the migration of its speakers out of their small primary habitat in all directions. Starting from the 1980s, alternative theories have been proposed that present language shift as the main scenario of the Slavic spread, emphasizing the presumed role of Slavic as the lingua franca of the Avar Khaganate. Both the migration and the language shift scenarios in their extreme forms suffer from factual and chronological inaccuracy. On the basis of some key facts about human population genetics (the relatively recent common ancestry of the East European populations), palaeoclimatology (the Late Antique Little Ice Age from 536 to around 660 CE), and historical epidemiology (the Justinianic Plague), we propose a scenario that includes a primary rapid demographic spread of the Slavs followed by population mixing and language shifts to and from Slavic in different regions of Europe. There was no single reason for the Slavic spread that would apply to all of the area that became Slavic-speaking. The northern West Slavic area, the East Slavic area, and the Avar sphere and South-Eastern Europe exhibit different kinds of spread: mainly migration to a sparsely populated area in the northwest, migration and language shift in the east, and a more complicated scenario in the southeast. The remarkable homogeneity of Slavic up to the *jer* shift was not attributable to a lingua-franca function in a great area, as is often surmised. It was a founder effect: Proto-Slavic was originally a small Baltic dialect with little internal variation, and because of this bottleneck it took time for the individual Slavic languages to develop in different directions.

**Keywords:** Slavs, Proto-Slavic, Great Migrations, Avars, language spread, language shift, demographic history.

### 1 The migration scenario and the shift scenario

The Slavic languages, with some 300 million speakers, comprise the predominant language group in the eastern half of Europe and in Asian Russia. *The Slavic spread* refers to the process whereby the Proto-Slavic language, originally the language of a small ethnic group unknown to ancient authors, quickly expanded its speech area over central, eastern, and south-eastern Europe in the second half of the first millennium CE. This process is still poorly understood. In the east, there were no large Slavic states comparable to the Roman and later Frankish empires in the west that would have spread Slavic as a prestige language. In the words of historian Peter Heather (2010: 386), “the rise of Slavic Europe is one of the biggest stories of the entire first millennium. Where did it come from and what role did migration play in its creation?” This is arguably the most important single question in the historical study of the Slavs and their languages.

Language spreads usually involve both migrations (demographic expansion) and language shifts (purely linguistic expansion). In what follows we estimate their proportional role in the Slavic spread on the basis of language-internal considerations, also taking into account some key facts from human population genetics, palaeoclimatology and historical epidemiology.

The scientific historical study of the Slavic languages, as that of other non-classical European languages, arose in the era of National Romanticism (Schenker 1995: 242–245). The basic presupposition that language expansions are carried predominantly by migrations was hardly ever questioned in that research paradigm. It was only in the history of the expansion of Latin that the important role of language shifts was acknowledged: not all modern Romance peoples were assumed to be descended solely from the colonists who had come from Latium (Jordan & Manoliu 1972: 70–71). However, the Roman Empire was considered a unique phenomenon, at least in European history. The spread of Proto-Slavic was always attributed to the migration of its speakers, starting from the Slavic original habitat or homeland (German *Urheimat*, Russian *prarodina*; Herrmann 1986a,b). Dvorník’s (1962: 1–3) well-known monograph on mediaeval Slavs starts with the story of Slavic, Germanic and other “tribes” migrating from somewhere and “penetrating” and “occupying” new lands. However, there are no historical sources on large-scale Slavic migrations, apart from in the south where the Slavs, together with the Avars, invaded Byzantine lands from the mid-sixth century CE on (see Vasmer 1970:

174–176 and Schenker 1995: 9–18 for an overview of the sources). The archaeological record is not unequivocal, either, although it is traditionally interpreted on the assumption that such a migration must have taken place (Gimbutas 1971). All too often has archaeological evidence been invoked to support particular nationalist histories, and archaeologists' own national backgrounds have sometimes skewed their interpretations (Heather 2010: 388–392).

The archaeological record of Eastern Europe does show different cultural spreads, but nothing comparable to the large linguistic spread of the Slavs. As Barford (2001: 45–46) notes, archaeologists should not only presuppose migrations, but should also demand an explanation for them: “The movement of families and all their goods, livestock, seed for the next year and food for the journey was not a decision which would have been taken lightly and we are ignorant of the reasons for, and mechanisms of, this process.” Yet, the migration scenario still has its adherents, Timberlake (2013) having recently written a synthesis of its basic tenets. His conclusion reads as follows: “In these respects – implicit agency and continuity – Slavs were an ethnos and their shared (but malleable) culture is what allowed them to spread throughout central and eastern Europe. Slavic language spread because Slavs spread, and Slavs could spread because colonizing was part of their culture” (Timberlake 2013: 353). There is a certain danger of circularity here – the Slavs spread because such was their nature – but Timberlake does offer some keen observations on historical sources, and population movements must have had at least some role in the spread of Proto-Slavic.

After the Second World War, history and archaeology scholars in Western Europe and North America tried gradually to liberate their disciplines from the migration models of National Romanticism, and to describe cultural spreads instead (Heather 2010: 12–21). Heather (2010: 21) describes this paradigm shift as follows: “Migration – though the word is now scarcely used – remains part of this story, obviously, but with the scaling-down of the number of people envisaged as participating in those journeys, the key historical process is no longer the movement itself but the gathering-in of new recruits afterwards.” A scenario of the Slavic spread based on language shift was developed in this spirit towards the end of the 20th century. Omeljan Pritsak (1983) first proposed that Slavic served as a lingua franca in the military camps of the Avar Khaganate (from the mid-sixth century to the end of the eighth century) and spread because of this status and function. This linguistic model was further developed by Horace Lunt (1984–1985), Johanna Nichols (1993), Georg Holzer (1995) and Florin Curta (2004): for a recent general discussion, see Boček (2014: 49–104). Scholars following this line of thought have varying ideas about the true origins of Slavdom as an ethnicity, but they share the belief that Slavic as a lingua franca attracted language shift and defined ethnicity: it was possible not only to be born a Slav but also to become a Slav.

As Lunt (1984–1985: 421–422) first pointed out, this theory would also explain the relative homogeneity of the Slavic language up to the 10th or even 11th century when it had already spread to large areas: the Slavs, recruited as warriors of the Avars' border guards and other troops, disseminated their language as a “homogenized lingua franca into settled communities all over Eastern Europe”. Along with several other scholars, Lunt does not call this stage of Slavic, roughly 800–1100 CE, “Proto-Slavic” (which would have been the language of the original small group of Slavic speakers) but rather “Common Slavic”.

The scenario of the Slavic spread intertwined with the Avar expansion in a certain period and in some areas is compatible with several known historical facts (Pohl 2015: 94–127). However, the idea of explaining the spread of Slavic mainly in terms of its use as the lingua franca of the Avar troops and realm meets with at least four kinds of difficulties.

First, there is a lack of historical knowledge about the languages used in the Avar Khaganate. It is not even known for sure what kind of language the Avars originally spoke: both Mongolic and Turkic have been proposed (Pohl 2015: 223–225). Nichols (1993: 387–388) assumes that the European Avars had adopted an Iranian language, and that the significant layer of Iranian loans in Slavic originated from them (rather than from some eastern Iranian population next to the Slavic primary habitat). The lack of solid historical facts makes it difficult to judge the plausibility of the theory of a Slavic lingua franca, which remains mere conjecture.

Second, Avar influence cannot explain the Slavic expansion to large parts of the Great European Plain, between the Elbe in the West and Lake Ilmen in the East. “Im allgemeinen reichte der lange Arm des Khagans kaum über die Karpaten, jedenfalls nicht zu den Elbslaven” (Pohl 2015: 119). It is difficult to assume any kind of koinéization here, yet Kallio (2006) showed that the earliest Slavic loans as far north as in Finnic must be classified as Proto-Slavic in their form (for the historical context, cf. Sedov 1985: 193). As a matter of fact, Curta (2004: 148) does admit in his article about the Slavic lingua franca that the theory fails to explain the spread of Slavic into these regions, but he does not see this as a problem because he does not believe that such a spread took place at all: this is connected with his controversial theory

about Slav ethnicity being a relatively late historical invention of Byzantine authors (Curta 2001, 2015; see Section 6 below). Most proponents of the lingua-franca theory do not directly address this geographical problem.

Third, there is also a chronological problem, as Henning Andersen (p.c.) points out. The Avars arrived in Europe in the 560s: in 562 they fought against the Franks at the Elbe, in 563 they reached the Danube and in 567 they attacked Sirmium (Pohl 2015: 58, 501). Nevertheless, as early as in the middle of the century, Jordanes' history of the Goths reports that the Slavs, appearing in different groups known as the Sclaveni, Venethi, and Antes, are a "populous race" and occupy a "great expanse of land" between the Vistula, the Dniester and the Danube (transl. according to Schenker 1995: 9). The Slavs' crossing the Danube and penetrating the Balkans later in the sixth century may have been partly linked with the Avar raids, but it is obvious that Slavic expansion had begun earlier and for other reasons.

Fourth, as Juhani Nuorluoto (p.c.) and Marc L. Greenberg (2017: 177) point out, the Slavic of the expansion period does not exhibit changes that are typical of lingua francas learnt as L2 by adult speakers (Trudgill 2011). Late Proto-Slavic (or Common Slavic) remained a morphologically complex language, and its complicated accentological system in particular (Stang 1965; Dybo 1981) shows no trace of a possible lingua-franca function. This sharply contrasts with the Romance languages and their drift towards an analytic structure due to the spread of Latin as a lingua franca (Clackson & Horrocks 2007: 276; Trudgill 2011: 17).

All in all, both migrations and language shifts must have been components of the Slavic spread, but in their extreme forms both scenarios come up against serious factual and chronological problems. We now turn to some recent findings from sciences other than linguistics to find a balance between those two scenarios.

## 2 The population genetics of Eastern Europe

The traditional migration scenario was linked, at least in popular imagery, with certain ideas about the physical anthropology of the Slavs. Thus, although Alfons Mucha's monumental series of paintings *Slovanská epopej* ('The Slav Epic') depicts historical Slavs of various appearances, the canvas "Slavs in their original homeland" (1912) shows two fair Europeans as representatives of the early Slavs tormented by the Goths and steppe nomads. Fair hair, common among West and East Slavs, may still today be associated with the "genuine" or "original" Slavs in the popular imagination rather than the darker hair colours of the south. However, as Johanna Nichols (1993: 378) points out, "in their physical anthropology the various modern Slavic populations resemble their respective nearby non-Slavic neighbors more than all Slavs resemble each other". Nichols also considers this observation an argument for regarding the Slavic spread primarily as a linguistic rather than a demographic event.

We can now rely on the more powerful information source offered by human population genetics in addition to observations based on physical anthropology. Kushniarevich et al. (2015) compared various Slavic-speaking populations with their non-Slavic neighbours, and showed that the genetic differences closely mirrored geography: the South Slavs differed from the East and West Slavs, and although Ukrainians, Poles and Belarusians, as well as Russians from central-southern regions, appeared quite similar (and thus formed "an extended geographic area with low genetic differentiation", p.3), north Russians showed close genetic proximity to their Finno-Ugric-speaking geographic neighbours. Czechs turned out to be similar to Germans, Slovenians to Hungarians, and Bulgarians to Romanians (for a summary of the results of the study, see also Külmoja 2015). These trends were visible both in the Y chromosome and genome-wide.

However, this similarity of the Slavic populations to their non-Slavic neighbours is not a strong argument against the migration scenario. One thousand years having elapsed since the completion of the Slavic spread (with the exception of the much later Russian spread to Asia), a high degree of local similarity is to be expected, irrespective of whether the primary Slavic spread was a demographic or linguistic expansion. Even if the various Slavic peoples arrived in their present habitats mainly through migrations, they naturally began to interact with their neighbours and a great deal of genetic interchange must have taken place: in terms of outcome, it may seem as if a language shift had occurred. The rate of levelling of the local gene pool may have depended on local factors such as from how far away spouses were sought, what role ethnic boundaries had in this, and even whether sexual selection favoured individuals with a certain appearance. Given the unknown scope and strength of such factors, it is difficult to differentiate between the migration and language-shift scenarios merely on the basis of overall genetic similarities between populations.

Fortunately, genetic data can also provide estimates on the time frame of population events and recent relatedness. We refer to studies that are based on analysing consecutive markers along a short segment of a chromosome rather than

one marker at a time, as the overall estimates of genetic affinity do. (Also the features on which physical anthropology focuses are typically regulated by genes that are spread across the genome rather than being in co-inherited blocks.) The chromosomal segments inherited from a given ancestor tend to become shorter across generations, hence distantly related individuals, on average, share shorter segments than closely related individuals. The length of shared segments can therefore be used as a proxy for timing events such as population splits and mixtures. Ralph & Coop (2013), who analysed shared genomic stretches across European populations, detected substantially elevated levels of recent sharing within Eastern Europe: "...even geographically distant individuals in these eastern populations share about as many common ancestors as do two Irish or two French-speaking Swiss" (p. 7). They estimate that these common ancestors lived 1,000 to 2,000 years ago (with a higher probability at the older end). Notably, the sharing extends to the non-Slavic populations of Eastern Europe (Hungary, Romania, Albania and Greece), suggesting a complex history of migrations and potential language shifts, as well as local population interactions both during and after the migrations.

In the same vein, Hellenthal et al. (2014: 748-749, 751) detected a clear signal of genetic admixture in Slavs (Polish, Bulgarian, Belarusian) and their neighbouring Eastern European populations (Lithuanian, Hungarian, Romanian, Greek). These populations showed a mixture of three theoretical genetic sources (northern, southern, and Northeast Asian, each represented by a proxy population), of which the Northeast Asian component was smallest. The southern component dominated in the southern populations and the northern component in the north, a trend that was consistent across both Slavic and non-Slavic populations. Furthermore, the Polish population could serve as a proxy for the northern component in the other populations. The admixture was dated 440–1080 CE. Intriguingly, the oldest admixture times were those from the Polish population, which could indicate that the northern genetic component represents a southward expansion of the Slavs from Poland or a nearby area. However, the spatial resolution of the dataset is limited.

Thus, human population genetics prove unequivocally that a major demographic expansion took place in Eastern Europe, most likely 1,000–1,500 years ago. We think it is safe to assume, as the original authors do, that this was linked to the Slavic linguistic expansion at the same time, so that a significant part of this expanding population at least was Slavic-speaking. This does not, however, imply a return to classical migration theory in its purest form, as the traces of the demographic expansion extend to several non-Slavic populations of Eastern Europe as well. The genetic patterns do not follow present-day linguistic boundaries.

Is it the case, then, that all East European populations descend from speakers of Proto-Slavic? It is – in the trivial sense that all Europeans who lived about one thousand years ago or earlier and have descendants today are ancestors of *all* people of European descent (Ralph & Coop 2013: 9–10; Rutherford 2016: 143–150). Because the Proto-Slavs lived more than a thousand years ago, all Europeans are descended from them (and from other populations, of course). However, Eastern Europeans are related to the Proto-Slavs along such numerous lines of descent that the probability of finding shared genetic material has remained higher than elsewhere, but this does not exclude the influence of local populations that the expanding population met.

The linguistic counterpart of this genetic picture is the primary language spread caused by migrations, probably followed by local language shifts to and from Slavic as well as different degrees of subsequent interaction between neighbouring populations. We will now consider some of the probable reasons for the Slavs' migration, and then look at the possible roles of migrations and language shifts in the three major areas to which the Slavs expanded.

### **3 Cold and plague**

Earlier literature tended to present the Slavic migrations as a significant but isolated process, without a larger historical context. They could therefore easily be brought into question when migrations in general became a less preferred explanatory model. As a matter of fact, there are two major historical events that could explain why migrations happened in Europe in the sixth and seventh centuries, viz. the Justinianic Plague (541 to circa 750 CE) and what was probably the coldest period of the Common Era, sometimes called the Late Antique Little Ice Age (536 to circa 660 CE). In general, circumstances beyond political and military history should be given more consideration than has been customary among scholars seeking reasons for past demographic changes.

The Justinianic Plague was the first of the three historically recorded pandemics caused by the bubonic plague, the second being the Black Death of the late Middle Ages, and the third the plague in China in the second half of the 19th century (Little 2007). It was a major human catastrophe in the Mediterranean world and Western Europe, including the

British Isles. According to some estimates, during the first outbreak of the Justinianic Plague there were some 5,000 deaths every day in Constantinople alone, and the death toll across the Byzantine Empire reached perhaps 25 million – and even 50 million in all considering the subsequent outbreaks over the next few centuries (Rutherford 2016: 130). As Little (2007: 15–16) points out, the more than two hundred years of the pandemic “witnessed among other significant things the Lombard takeover in Italy, the breaching of the Balkan frontier by the Slavs, the transformation of the eastern Roman Empire into the Byzantine Empire, the Christian missions from Rome to England and thence to Germany as well as those from Ireland to Scotland and Frankish Gaul, and, perhaps most significantly, the beginnings of Islam and the Arab conquests”.

There are no historical sources on the Justinianic Plague east of the Rhine and north of the Danube (see the map in Little, ed., 2007: xvi–xvii). Some of the historical information about the plague in Central Europe (cf. Trier and Aschheim on Little’s map) has recently been corroborated in DNA studies, which have identified traces of the plague bacterium in fifth-to-seventh-century graves in Bavaria, for example (Wagner et al. 2014, Feldman et al. 2016). Future studies could, of course, reveal plague cases even north of the Danube.

However, the plague alone would not seem to have been a sufficient reason for the Slavic migrations. Another major part of our historical explanation is therefore the exceptionally cold period caused, in all probability, by volcanic eruptions in 536 and 540 (Helama et al. 2018; Büntgen et al. 2016; for contemporary sources on the first eruption, see also Arjava 2005). Exceptionally cold summers may have lasted from the year 536 to the 570s (Helama et al. 2018: 7), and a cold phase in the Earth’s climate continued until about 660 CE (Büntgen et al. 2016: 233). Both cooling and the reduction of solar irradiance under a volcanic dust veil decreased crop yields, caused famine, and probably gave people a reason to migrate in search of new agricultural lands.

The Justinianic Plague brought about the depopulation of agricultural communities in the Byzantine Balkans (Little 2007: 24; Sarris 2007: 129–130). A law issued by Justinian in 545 refers to deserted agricultural lands (*agri deserti*, Sarris *ibid.*). This depopulation of the Balkan countryside and some of the towns also shows in the archaeological record (Barford 2001: 69), and together with the partial collapse of the imperial administration and the weakening of the border defences it certainly enabled the Slavs and other barbarians to claim new settlement areas in the Byzantine territory. Constantine VII Porphyrogenitus (905–959) wrote later that “the whole country [of Peloponnesus] was Slavicized and became barbaric when the deadly pestilence consumed the whole world” (*De Thematibus* 2.6, Pertusi 1952: 91, JL’s translation; cf. Vasmer 1970: 15; Sallares 2007: 286–287). Although he relates this process to the reign of Constantine V (“Copronymus”, 741–775), his text may preserve an even older memory of the demographic effects of the plague.

The Justinianic Plague and, more recently, the cold period of the sixth and seventh centuries (which may in itself have been one of the reasons for the rapid spread of the plague) have both been linked with just about all the upheavals that occurred during the transition from Antiquity to the Middle Ages (cf. Büntgen 2016: 234). Such sweeping generalizations are not always convincing. However, given the genetic evidence that large-scale migrations took place in Eastern Europe in the second half of the first millennium, the cooling of the climate and the depopulation caused by the plague are good candidates for pushing and pulling forces, respectively, causing migrations at least in the southern direction. Moreover, they are a better match with the beginning of the Slavic expansion than the Avar raids, which may after all have been a concomitant rather than a triggering event.

#### **4 The northern West Slavic area**

The general result that Slavs closely resemble their nearest non-Slavic neighbours genetically has one notable exception: the northern West Slavic area comprising speakers of the Lechitic and Sorbian languages. According to Kushniarevich et al. (2015: 10), although the Czechs are genetically close to their immediate Germanic neighbours in the west, “a clear genetic border exists nowadays between Poles and their immediate western neighbors Germans, and even between a West-Slavic-speaking minority – Sorbs – and their Germanic host population”. Veeramah et al. (2011) found in an earlier study concentrating on the Sorbs that “[d]espite the geographical proximity to German speakers, the Sorbs showed greatest genetic similarity to Polish and Czech individuals” (p. 995). Thus, the northern part of the linguistic boundary between Germanic and Slavic coincides with the genetic boundary, even among the Sorbs, who are nowadays totally surrounded by speakers of German.

We surmise that this genetic boundary at least partially reflects the settlement history of the northern West Slavic area. Before the Slavs, the area in question was probably settled by Germanic peoples, but there is clear hiatus between the two populations. There is archaeological evidence that the land east of the Elbe and the Saale had been only sparsely populated for decades, even for a century before the arrival of the Slavs (Barford 2001: 25–26, 46, 64–65, and the maps on pp. 395–396; Timberlake 2013: 338; Fried 2015: 25–26). Heather (2010: 371–377) mentions the “Germanic culture collapse” that took place in a region covering about a million square kilometres in Central and Eastern Europe long before the arrival of the Slavs. Similarly, recent archaeological studies conducted by Biermann (2016, and in this volume) confirm a gap of 100 to 150 years between the earlier Germanic and later Slavic settlements in Pomerania, where the Slavs arrived at around 700 CE. Pollen analyses show that the agricultural lands in what is now Poland were abandoned to forest. When the Slavs arrived they dug new wells for their settlements and did not continue to use the older wells that could no longer be seen, even if they settled in the same places in which the Germanic people had been living.

It is beyond the scope of this article to discuss all the possible reasons for the disappearance of the Germanic population in what was to become the northern part of the West Slavic linguistic area, but it is certainly not far-fetched to say that the Late Antique Little Ice Age (536 to circa 660 CE, see the previous section) may have had something to do with it and may have triggered migrations away from the region. It is noteworthy that the arrival of the Slavs coincided with the end of this exceptionally cold period, when agriculture again became more productive in these lands.

Juras et al. (2014) show the matrilinear continuity of at least some genetic haplotypes over two millennia in present-day Poland, but this is not an argument against settlement discontinuity in Poland itself, because the haplotypes in question could easily have been reintroduced from adjacent areas.

In all, it seems that the Slavic spread to the northwest, to the Elbe and the Pomeranian coast, was predominantly a demic spread, in other words a classical migration. There seems to be no Germanic or other recognizable linguistic substrate in northern West Slavic (with the exception of possible Baltic substrate in some areas, cf. Timberlake 2013: 338); Low German adstratal influence is of a later date.

The situation was different in the southern parts of the West Slavic language area. Germanic and Slavic certainly came into direct contact in Bavaria and Bohemia, for instance, and there is no clear pattern of one settlement type being replaced by another (Fried 2015: 55; Klír 2016, and in this volume). Czech and Slovak are also known to share some features with South Slavic rather than with Lechitic, such as the result of the liquid metathesis. The Central Slovak dialects in particular share many isoglosses with South Slavic (see the maps in Holzer 1995; Nuorluoto 2010; cf. also Greenberg 2017: 178–179). The migration patterns must have been more complicated here, and they are connected with what happened in the Avar sphere (see Section 6 below).

## 5 The East Slavic area

The presumed primary habitat of the Slavs, between the upper Vistula and the Dnieper, partially overlaps with the southern part of the present-day East Slavic language area in Europe. When the Slavic tongue expanded from there to the central and northern parts of the eastern area, the sociolinguistic situation seems to have been very different from that in the northwest: Baltic and Finno-Ugric languages were spoken in these eastern lands, and language shift seems to have played a significant role in the Slavic spread.

The Tale of Bygone Years (*Povest' vremennyx let*, also called the Russian Primary Chronicle in English) depicts early Rus' as a multi-ethnic country with many Slavic and Finno-Ugric tribes and a Scandinavian elite (Lund 2006; Saarikivi 2009: 113–114). Some four or five per cent of the anthroponyms in the Novgorod birch bark documents (11th–15th century) are still clearly Finnic, and it is safe to assume that some people with Slavic and Scandinavian names in these documents were in fact Finnic-speaking (Saarikivi 2007: 241). East Slavic became an elite language attracting shift, especially when Christianity and Cyrillic literacy was gradually introduced to Rus' in the 10th and 11th centuries, but the shift from Finno-Ugric and other minority languages of European Russia to Slavic was slow, and continues to this day (Saarikivi 2006).

Finno-Ugric substrate influence in the phonology and grammar of Russian has been studied extensively (Veenker 1967; Kiparsky 1969; Timberlake 1974; Dingley 1995; Saarikivi 2006; Vaahtera 2007, 2008; Dombrowski 2010, 2013; McAnallen 2011; Grenoble 2013: 583–585). Discussion about possible substrate influence in individual features of Russian continues, and in some cases the question may remain unsettled, but the body of grammatical and onomastic

evidence is sufficient to prove the significant role of language shift in the East Slavic area. In a similar vein, Tvauri (2007) argues for settlement continuity in Northwest Russia from an archaeologist's point of view. The shift must have concerned not only Finno-Ugric speakers, but also Baltic speakers living to the south of them, although the similarity of Baltic and early Slavic makes substrate influence harder to discern, except in hydronymy (Toporov & Trubačev 1962).

Genetic evidence strongly supports the language-shift scenario, at least in the northern regions. According to Kushniarevich et al. (2015: 3), Russians from the northern part of European Russia are genetically close to their Finnic-speaking neighbours. Khrunin et al. (2013) discovered a similar pattern. However, this also makes northern Russians different from the rest of the East Slavs, which shows that migrations and shifts played a proportionally different role in various parts of what is now the Russian-language area. Saarikivi (2009: 117) assumes that the warming of the climate in the ninth century was one of the reasons for the northward migrations of Slavic speakers, among other groups, north of the 60th parallel.

Kushniarevich et al. (2015: 6) also found some genetic similarity between Lithuanians and Latvians on the one hand, and Finno-Ugric Mordvins on the other, which parallels the hydronymic evidence of a Baltic-speaking zone that originally separated Slavic and Finno-Ugric speakers from each other before the Slavic northward spread superseded it.

Thus, the Slavic spreads to the northwest (the northern West Slavic area) and the northeast (the northern and central East Slavic area) were very different in nature: migration was the predominant carrier of the Slavic language to the northwest, whereas language shift to the prestige language had a significant role in the northeast, albeit different in different regions, and it is still in progress in many rural areas of Russia. Different substrate languages of Russian (Baltic, Finno-Ugric, Turkic) naturally had different structures, and did not change Russian substantially in spite of some substrate features: in fact, Russian remains one of the most conservative Slavic languages. Moreover, the language shift had such a slow pace over centuries that it did not cause significant simplification in the grammatical structure of East Slavic.

## **6 The Avar sphere and South-Eastern Europe**

The Slavic spread to the Central and South-East European lands that were under the influence of the Avar Khaganate and the Byzantine Empire is historically better attested than the northward spreads. Byzantine authors provided plenty of contemporary testimonies on the Slavic expansion to the south (Vasmer 1970 [1941]: 11–19 gives a good overview of the sources). On the other hand, there are good historical explanations for this process, as described in Section 3 above on climate cooling and the Justinianic Plague. There is no doubt, either, that the Avar raids to Byzantine lands regularly involved Slavs and brought them to the imperial territory (Pohl 2015: 94–127). Was it, then, the massive migrations that made Slavic the largest language group in the Balkans?

The intricate network of reciprocal influences that later formed the Balkan Sprachbund makes it impossible to observe the layering of languages in Southeast Europe by means of simple substrate models. However, the Slavic toponyms that Vasmer (1970 [1941]) collected in his classical monograph are powerful evidence of permanent Slavic settlements all over mainland Greece from the sixth century onwards: there are even indications that some Slavic-speakers may have settled on the isle of Crete (Vasmer 1970: 174–176; Skach 2015: 16). However, contrary to traditional thinking in Slavic studies, this toponymic substrate does not directly support a simple migration scenario: some of the original population could have shifted to Slavic, or simply borrowed the vocabulary and then carried Slavic toponyms to new areas. In addition, many previous populations were assimilated by the Slavs in the large areas that became permanently South Slavic speaking, from the Alps to the Black Sea.

According to Ralph & Coop (2013: 11), present-day inhabitants of Greece and Albania share the relatively recent common ancestry of all East Europeans (see Section 2 above), which in their view and ours reflects the primary migratory expansion of the Slavs. However, the Albanians also share a higher number of common ancestors of their own, which Ralph & Coop interpret as a sign not so much of isolation as of a “relatively small, cohesive population that has persisted for at least the last 1,500 years”.

Kushniarevich et al. (2015: 3) found in their study that the South Slavs were genetically differentiated from both West and East Slavic (as well as Baltic) populations, “with internal differentiation into western (Slovenians, Croatians and Bosnians) and eastern (Macedonian and Bulgarian) regions of the Balkan Peninsula with Serbians placed in-between”. Slovenes are genetically close to Hungarians, whereas Macedonians and Bulgarians are close to Romanians. Kushniarevich summarizes the results of her group as follows in Külmoja (2015): “We do not see a strong genetic signal

in genomes of modern Slavic speakers that would support massive movements of Slavs towards the Balkan Peninsula during 700–800 AD [but we do not fully understand why she mentions such a late date]. It seems that a major mechanism in the spread of Slavic languages was cultural transmission rather than physical replacement of indigenous people by the Slavs. On the other hand, fishing out genetic traces of historic migrations within Central and East Europe – a rather homogeneous and densely populated region – is not a trivial task.”

We conclude that it was migration, partly concomitant with the Avar raids, that first took the Slavic language to Southeast Europe, but the main mechanism accounting for its spread after that was language shift from the local Balkan languages to Slavic. There is also historical and linguistic evidence on the still later shifts from Slavic back to Romanian, Albanian and Greek (the latter process continuing in part of Albania and Northern Greece to this day).

It is easy to imagine that some Slavs remained and settled as agriculturalists when the nomadic Avars withdrew from Byzantine territory: because of the plague, there was unoccupied agricultural land available. The ensuing large-scale language shift is more difficult to explain, given that Slavic was not a prestige language, and even if it had been a lingua franca of the Avar khaganate (which we do not really know), the Avars did not establish any permanent administration in the Balkans. However, if the imperial administrative structures had largely collapsed, the tribal networks of the Slavs constituted the only kind of social structure among the agricultural population outside the few cities that remained Greek. Nichols (1993) and Pohl (2015: 127) suggest that the Slavic ethnic identity was relatively easy to adopt as it was based mainly on language, not on descent and status as was probably the case with Avar identity, for instance. Higham and Ryan (2013: 111) further suggest a parallel case in early Anglo-Saxon England, when the language of the empire was replaced with a new vernacular once the earlier Roman society with its more extensive hierarchies and technology had retreated.

We do not subscribe to archaeologist Florin Curta’s view (2001, 2015) according to which Byzantine authors invented the Slavic migrations to explain historical developments, and the Slavic identity was only created by powerful local leaders operating at the Byzantine frontier. In fact, Curta seems to vacillate between two kinds of argument against the existence of early Slavs: the *de dicto* argument that no ethnic group called “Slavs” existed before some historical events at the Danube border of the Byzantine Empire, and the *de re* argument that what is generally assumed about the early Slavs holds true of no ethnic and linguistic groups, whatever they were called. Either way, his labelling of prehistoric Slavs as a “fairy tale” (sic!) is ill-founded. As for the name of the Slavs, there are plenty of historical sources naming tribes by the root *\*slav-* (> *slov-*) in various parts of Central, Eastern and South-Eastern Europe, and its etymological connection with ‘language’ and ‘speaking’ remains highly plausible (Andersen 2017), as is typical of language-based ethnic identities. As for linguistic history, the Slavic language family is totally unexplainable without an earlier protolanguage: Curta’s (2015: 126) label “an artificial, scholarly construct not attested by any piece of hard evidence” only shows his ignorance of the historical-comparative method. The existence of a protolanguage that is only about 1,500 years old and has more than a dozen closely-related daughters, several of them with early written sources, is attested by very hard evidence indeed.

After their spread to South-Eastern Europe, some South Slavic languages were caught up in the Balkan Sprachbund, which was characterized by strongly congruent developments in specific sociolinguistic circumstances (Lindstedt 2000, 2014, forthcoming). These later developments are beyond the scope of the present article, however.

## 7 The homogeneity of Slavic in the migration period

The Proto-Slavic language, probably spoken in a relatively small area, dates back to around the year 500 CE, but as Holzer (1995; 2002) argues, it remained fairly uniform during its primary expansion around 600 CE. Indeed, dialect differences in Slavic remained surprisingly small even during what is often called the Common Slavic period up to the *jer* shift (which took place in the 10th–12th centuries depending on the dialect, see Bethin 1998: 104 and the literature quoted there). We have rejected the idea that some kind of lingua-franca use or koinéization in the Avar realm could explain the uniformity of Slavic in such a large area (see Section 1 above). What, then, was the reason for the late differentiation of Slavic in its new speech area between Northwest Russia, the Elbe in the West, and southern Greece?

We should first make it clear that the uniformity of late Common Slavic should not be exaggerated. To give a concrete example: the fact that the word for ‘grandfather, forefather’ could be written ДѢДЪ in Cyrillic letters all over South and East Slavic areas, and that it is represented as *dědv* in Slavic etymological dictionaries, does not mean that such a thing



as the Common Slavic pronunciation of the *jat*' (ѣ, ě) ever existed. The last common pronunciation of the word was the Proto-Slavic *\*dēdu*, and this is what etymological dictionaries ought to use as their lemma (Lindstedt 1991; Holzer 2002: 553–554 and the literature quoted there). The sign ě can only be read as “the later reflexes of the long *\*ē*, different in different dialects”. The Proto-Slavic vowel system had an opposition of short and long vowels, and the phoneme that is traditionally marked with *o* was still a short *a*. Traditional reconstructions such as *\*gordb* (instead of *\*gardu*) for ‘castle, town’ are misleadingly anachronistic in that nowhere did the Proto-Slavic short *a* become *o* before the liquid metathesis or the East Slavic *polnoglasie*.

However, even this real Proto-Slavic vowel system was preserved for a surprisingly long time. It is attested in the oldest Slavic loans in Finnic (Kiparsky 1963: 82; Kallio 2006: 155), in the oldest Slavic loans in Baltic (Stang 1965: 52–55) and, at the other end of the speech area, in the oldest Slavic toponyms in Greece (Skach 2015: 225). Some of the old length distinctions are discernible even in the oldest Slavic loan words in Hungarian, although the weak *jers* seem already to have disappeared by that time (Xelimskij 1988). Given that the Hungarians arrived in Pannonia only after Cyril and Methodius had created the Old Church Slavonic writing system based on qualitative rather than quantitative vowel distinctions, we must assume that the Slavic dialects in Macedonia on which they based their new literary language were not archaic but innovative in this respect: the Greek writing system naturally led the holy brothers to mark qualitative rather than quantitative distinctions if both were phonetically present.

This example shows that all dialects of the expansion-period Slavic basically shared the same vowel system, although not exactly in its later form recorded by Cyril and Methodius. Similar examples are to be found in other components of Slavic phonology and grammar. Our explanation for this remarkable phenomenon is that Proto-Slavic was originally a small Baltic dialect with little internal variation, and because of this bottleneck it took time for the individual dialects to develop in different directions. The Common Slavic uniformity is thus mainly a founder effect (cf. Mufwene 2008: passim). A later parallel case is represented by Russian, which exhibits only small dialectal variety in the large Asian regions into which it spread quickly after the 15th century. In addition to this mere founder effect, some types of migration as such are also known to cause dialect levelling when communicative needs become relatively more important than the emblematic functions of older dialects (Hock 1991: 467–471; cf. Holzer 2002: 552). All this does not exclude the hypothesis of Slavic as a common language in the Avar sphere, mentioned above, but even if this kind of use could be proved, it would only give a geographically and temporally limited explanation of Common Slavic uniformity.

The relatively recent common ancestry seen in the genetic makeup of East Europeans (Section 2 above) naturally supports our model of a small founder population for the Slavic spread. The increasingly generally accepted idea that Proto-Slavic was originally a Baltic language (or, in other words, that Proto-Balto-Slavic and Proto-Baltic were practically the same chronological layer, Proto-Slavic being their daughter), is not crucial for our explanation, but it, too, would nicely fit in with our idea about the small size of the original Proto-Slavic speech area. We cannot discuss the whole Balto-Slavic question here, and confine ourselves to referring to Junttila’s (2016) recent study showing how the oldest Baltic loans in Proto-Finnic support the theory of the Baltic origin of Proto-Slavic.

## 8 Migration, language shift and the prehistoric Slavs

There is no single, solid explanation as to why the small Proto-Slavic language became the major language of half of Europe. Its expansion began with migrations, the traces of which are still discernible in the population genetics of Central and Eastern Europe. The pushing force for the first southward migrations of the Slavs was probably climate cooling: this made families and bigger groups seek more favourable conditions for agriculture in the Byzantine territory, whose population had been decimated by plague. When the climate gradually warmed again, migrations to west and north of the primary habitat also became feasible.

The further fate of Slavic and its speakers differed in different regions. The Slavs spread into a fairly empty area in what is now Poland and eastern Germany, which the previous population had abandoned about a century earlier. More to the south in Central Europe, and in all of South-Eastern Europe, the Slavs mixed extensively with earlier populations, which resulted in genetic interchange as well as language shifts to and from Slavic. In early Rus’, a significant proportion of Baltic and Finno-Ugric speakers shifted to Slavic. East Slavic spread as a prestige language after the adoption of Christianity and Cyrillic literacy, whereas the much earlier shift to Slavic in the Byzantine Balkans was probably

motivated by the openness of the Slavic tribal groups, which remained the only kind of local social structure after the partial collapse of the imperial structures due to the Justinianic Plague.

The Slavic spread was thus a result of multiple causation, as multiple historical forces happened to converge. Moreover, as Henning Andersen (p.c.) points out, its demographic effect was initially not as spectacular as its projection onto the map of Europe would seem to suggest. The Slavs did not settle large areas evenly, not at least in the north-western and northern regions, but rather established ribbon-like settlements along the rivers. The total size of the population need not have been high despite the broad geographical span.

We have shown that population genetic data is useful in differentiating between linguistic scenarios for the Slavic spread. Few publications, however, have directly addressed questions pertaining to aspects such as the location of the Slavic homeland and the relative contributions of gene flow before and after the Slavic spread to the genetic patterns observed in extant populations. Therefore, future analyses including more extensive sets of East European populations and relying on methods such as those used by Hellenthal et al. (2014) could shed further light on the population events related to the Slavic spread. However, given the anticipated complexity of the events and the relatively close genetic affinities of the populations in question, studies of extant populations may not provide a definitive picture of the intricate processes of the past. In that case, pinpointing the exact local scenarios may require studies of ancient DNA (along the lines of Juras et al. 2014 and Šebest et al. 2018), because a time series of samples across the period of Slavicization in a given area could directly reveal the genetic continuity or the changes involved.

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