The Convergence of Czech and German between the Years 900 and 1500

Introduction

Czech and German have been in contact since the beginning of historical tradition in the 9th century A.D. In that century small principalities on the territory of Bohemia merged to form a larger state to become the Duchy of Bohemia under Přemyslid rule during the 10th century. The ruler of this state was a vassal to the East Frankish king and thus from the beginning the Duchy was part of the Holy Roman Empire. It controlled some minor states which are known as the Lands of the Bohemian Crown (Moravia, Lusatia, Silesia). In 1198 the Duchy turned into a kingdom, which continued to be part of the Holy Roman Empire.

The Czech tribes had apparently already been Christianized by German missionaries before 900 A.D. (we know rather little about this process) and the higher clergy tended to be German for quite a long time. German monastic orders played an important role in the cultivation of Southern and Western Bohemia during the 10th and 11th centuries. Later the Bohemian rulers invited “founders” into their country who should found new towns. From about 1250 German settlers cultivated the regions on the periphery, also with the support of the Czech rulers.

Czech names are known from the 9th century; the first words and short fragments of texts go back to the 11th century. The written language at that time was Latin, but we can assume that Czech and German dialects were spoken in the major cities, whereas the villages tended to be monolingually Czech. This situation began to change during the second half of the 13th century when written Czech began to gain ground, at first mostly in religious texts, but soon also in a chronicle known as the “Chronicle of Dalimil”, which was written around 1314.

Czech literature enjoyed a first flourishing period during the reign of Charles IV, King of Bohemia and Roman Emperor, who used Czech himself (besides Latin, French and German), but the literary language was still limited to religious texts and fiction. In the years after 1360 the whole Bible was translated, Czech thus being the first modern European language with the complete Bible in the vernacular.

The first tendencies of using the vernacular for administrative purposes can be observed in the second half of the 14th century. They can be seen in the context of the vernacular gaining ground all over Western Europe, but there were specific factors as well: Many towns which used to have a German majority became Czech: partly by assimilation of the German population, partly by migration from the surrounding villages.

These tendencies became much stronger in connection with the Hussite revolution, which began after the execution of the Czech reformer Jan Hus in Con-
stance in 1415. Czech became the language of the Hussite movement (though there were small groups of German Hussites as well) and was soon used in all spheres of public life. Printing in Czech began around the year 1470 (with the so-called “Kronika trojánská”) and a large number of books were printed before 1500.

If we try to describe the different phases of contact between Czech and German on the basis of Thomason and Kaufman’s model we can characterize them as follows (cf. Berger 2009a: 137–138). The first phase is the period before the year 1200, where we do not have any Czech texts or exact knowledge about the sociolinguistic relation between both languages. Nevertheless, we can observe a convergence of the phonological systems of both languages, which can be explained only by close contact. The following phase, from about the year 1200, was characterized by heavy borrowing from German to Czech. This was a period during which literary varieties of German exerted influence on the beginnings of literary Czech. The third phase is characterized by a temporary change of the language situation in the second half of the 14th century. At this time we can observe a language shift of German-speaking town population to Czech. During this period, which lasts till about the year 1450, the processes of language contact include phenomena different from the period before, especially in the field of phonology. At the same time other borrowing processes continue, but on a lesser scale. By the end of the 15th century literary Czech became so stabilized that the contact situation should be characterized as moderate borrowing.

At the beginning of the contact between Czech and German which belong to neighboring branches of the same language family exhibited some similarities inherited from their common ancestor, Proto-Indo-European. Their phonological systems were rather different, but both languages shared the opposition of short and long vowels. In morphology the core systems of nominal and verbal inflection in both languages were rather similar, if not to say congruent, at that time. Both languages had systems of fusional inflection by means of endings and phonological alternations (quantity alternations, umlaut-like alternations, apophony). Last but not least, the grammatical categories were rather similar, although in most cases the inventory of Czech categories was richer (seven cases instead of four cases in German, one additional number, the dual, until the end of the 15th century, more tenses).

Convergence of Phonological Systems from 900 to 1200

The phonological system of Czech attested in the oldest texts exhibits quite a few features which distinguish it from the (reconstructed) system of Common Slavic. The vowel system especially had undergone several changes, e.g. the loss of the reduced vowels ɻ and ɻ (which caused the emergence of the phonological opposition of palatalization), the change of the nasal vowels ɛ and ɼ to ě and u, a contraction of vowel groups divided only by the semivowel j and a restructuring of the subsystem of mid and open vowels. The original vowel ːa had
fused with the new vowel ě after palatalized consonants, and the reduced vowel ě had resulted in a new vowel ę in the so called “strong” positions (cf. Lamprechť/Šlosar/Bauer 1986: 50–52). Scholars differ in their view on ę: Most of them interpret it as an allophone of e; only Jakobson (1929) interpreted it as a phoneme (and I followed him in my studies). While the first of these changes occurred in all Slavic languages and the second in most of them, the third change is typical of the “central” Slavic languages (cf. Marvan 2000) and the fourth only of Czech (and partly Slovak). Through these changes the Czech vowel system acquired a shape characterized by an opposition of front and back vowel phonemes like a/ä, ă/e and u/ü (the elements of the latter pair are traditionally interpreted as allophones as well).

A further important feature of the Czech vowel system is the opposition of short and long vowels. Czech inherited this opposition from Common Slavic, but the importance of the quantity opposition increased through a series of innovations, which also brought about quantity alternations in the inflectional system (cf. mráz ‘freeze’, genitive singular mrazu, or kráva ‘cow’, genitive plural krav). Conversely, the intonation system with rising and falling accents, which had been characteristic of Common Slavic, was lost in Czech.

This vowel system was affected by two further changes which occurred later, presumably between the 11th and 13th centuries. In connection with a process which is labeled as “depalatalization” in Czech tradition, fronted ě changed to a before non-palatalized consonants. In other positions ě (often, but not exclusively resulting from older a after palatalized consonants) fused with the central vowel ě, and the phoneme ě (or the allophone ě after palatalized consonants) changed to i. The last two changes are called “přehláška” in Czech, which means exactly the same as German “Umlaut” – this led to some confusion in older literature, although Czech “přehláška” was caused by a preceding palatalized consonant, whereas Germanic umlaut was caused by i or j in the following syllable. Nevertheless, the effects of the changes were similar to some extent, since the “přehláška” caused alternations in the morphology, e.g. Old Czech přítel ‘friends’ (nominative plural) vs. přátel (genitive plural), or Jene, the vocative of the name Jan. These phonological changes caused a lot of homonymies in inflectional morphology and thus increased the difference between Czech and other Slavic languages (cf. Skalička 1941, 1951).

Another important change of the Czech phonological system concerns stress. Czech lost the free stress which was characteristic of the Slavic languages and replaced it with a fixed stress on the first syllable. This stress system resembles the root stress of German though it is not identical, and the situation is further complicated by the fact that neighboring Polish has fixed stress as well, but on the penult. In Berger (1995) I tried to explain the West Slavic fixed accent as a compromise between free stress in Slavic and fixed stress in Germanic, with the result that the stress is not mobile and is never placed on the last syllable of the word. The Czech and the Polish systems can then be explained as two different types of generalization.
The consonant system of Old Czech was much more stable than the vowel system. According to most scholars it was characterized by the important role of the palatalization opposition, which was allegedly preserved until the beginning of the 15th century. The main changes which should be mentioned here are the change of $g > h$, which is also characteristic of some other Slavic languages, and the assimilation of palatalized $r'$, which developed into the consonant ř, which is characteristic of Czech (and Old Polish), but not of Slovak.

If we try to characterize the development of the Czech phonological system in broad terms, we can say that consonantal distinctions had an impact on vowel distinctions with the effect that Old Czech had a rather complex vowel system, resembling neighboring German. This observation goes back to the 19th century. Even Gebauer, the founder of Czech historical grammar, already compared some of the processes to similar Germanic developments. An overview of these older opinions can be found in Beer (1905). Jakobson formulated the thesis that all those correlations that did not occur in German were eliminated from Czech, whereas those correlations that Czech and German had in common were preserved:

Il est caractéristique de voir les corrélations qui, en tchèque, en fin de compte, ont été liquidées, et celles qui ont été conservées. Ont été éliminées les suivantes : « accent musical ~ atonie » (absente de l’allemand), « accent d’intensité ~ atonie » [...]. A survécu la corrélation : « longueur ~ brièveté de voyelles » (de même qu’en allemand). En d’autres termes, dans la sélection des corrélations, le tchèque a suivi le modèle allemand. Dans les cas de « carrefours » phonologiques, le tchèque a choisi dans l’alternative celle des deux voies qui avait son parallèle en allemand [...]. (Jakobson 1929: 55)

The Czech historical grammars of the 20th century refuted this thesis and tried to explain all changes of the vowel system by internal factors. In my study from 2003 I tried to give a new account which resumes some of Jakobson’s ideas and interprets the pairs $a/i$, $e/e$ and $u/i$ as different phonemes. This way the opposition of palatalized and not-palatalized consonants must be assumed only for dental consonants (where it is preserved until today), and this means that the phonological system resembles the German system even more. Of course, the systems of both languages were not completely identical at the end of the 12th century (cf. Berger 2003: 23). German had more vowel phonemes and especially diphthongs (Czech had only one of them at that time, namely ie); Czech had more consonants, especially sibilants. Nevertheless, the systems were very similar and to some extent congruent, i.e. parts of them were organized according to the same principles.

It would be tempting to explain this state by a Germanic substrate of Old Czech, but unfortunately we know too little about the sociolinguistic situation in Bohemia at the time of Christianization. Language shift from Germanic to Slavic seems rather improbable, at least on a large scale. However, we can assume that the partial congruence of both systems might be the result of bilingualism occur-
ring in regions where Germans and Czechs lived together closely for a relatively long period.

Šlosar (2006) criticizes my proposal with reference to Newerkla’s study about German loanwords in Czech. He claims that the number of German loanwords before 1100 was rather small and that the assumption of intensive language contact in this period is not justified. I am not completely sure how to assess the percentage of loanwords before the beginning of written texts, so I do not know how to measure the intensity of contact. Nevertheless, the phonological processes which I assume should rather be explained by some kind of bilingualism, which is not necessarily linked to borrowing.

Heavy Borrowing from German to Czech after 1200
The close contact of Czech and German also brought about the borrowing of lexical elements. These borrowing processes had begun long before the Christianization of Bohemia and Moravia. Newerkla (2011, 101–107) enumerates 17 clear cases of loanwords from Germanic and West Germanic before 600 A.D. (as well as 10 unclear cases) and more than 70 loanwords from Old High German (cf. Newerkla 2011, 120–140). After the year 1150 the number of loanwords increases further: Newerkla enumerates more than 400 loanwords from Middle High German (cf. Newerkla 2011, 150–240).

The high number of loanwords lets us expect structural borrowing as well. In the following text I will concentrate on this issue, since several cases of structural borrowing have been discussed intensively since the 19th century. In contrast, the presence of a high percentage of German loanwords in Old Czech has not been disputed at all. Although classical Czech lexicography tended to ignore them (e.g. they were not included into the huge dictionary of Old Czech which Gebauer started to edit in 1902), they were studied by many scholars. Newerkla’s comprehensive description of all aspects of the problem has been available since 2004.

From the start I would like to stress that there are no examples of material borrowing of inflectional morphemes from German to Czech. The examples of structural borrowing which have been discussed so far concern periphrastic constructions – in the first place the periphrastic future tense and periphrastic past tenses – and modal auxiliaries. In the case of periphrastic constructions we can observe copying of structural models; the same is true of modal auxiliaries, although there has been some material borrowing of lexical items here.

The complete absence of material borrowing of inflectional morphemes may be surprising, but in my opinion it can be explained rather easily by the similarities of the core systems of nominal and verbal inflection in both languages which were mentioned above.

The situation was quite different with periphrastic constructions. At that time German possessed two periphrastic past tenses, perfect and pluperfect, which
were opposed to the simple past tense and were both formed with the auxiliaries haben and sein and the past passive participle (cf. Paul 2007: 292–293). Further, there was an emerging periphrastic future tense formed with the auxiliary werden and the present participle and the infinitive (cf. Paul 2007: 294–296) and a periphrastic passive voice formed with the auxiliaries werden and sein and the past passive (cf. Paul 2007: 301–304). Czech had two simple past tenses (aorist and imperfect) and two periphrastic past tenses, which are called perfect and pluperfect as well, but which were formed with the auxiliary být ‘to be’ and a past active participle (cf. Lamprecht/Šlosar/Bauer 1986: 244–245) Apart from that, it had an emerging periphrastic future tense formed with several auxiliaries (budu ‘I will be’, chců ‘I will’, jmám ‘I have’) and the infinitive of imperfective verbs (cf. Lamprecht/Šlosar/Bauer 1986: 245) and a periphrastic passive construction formed with the auxiliaries být ‘to be’ and bývati ‘to be usually’ and the past participle (cf. Lamprecht/Šlosar/Bauer 1986: 245–246).

I will not discuss the periphrastic passive here. In the Old Czech period it was used only in the past tense, following the model which is to be found in all Slavic languages, e.g. sentences like je psáno, literally ‘it is written’, but used with the meaning ‘it has been written’. From the 17th century this construction has acquired a present-tense meaning, and new forms are being used for the past, like bylo (na)psáno with the past copula bylo (cf. Lamprecht/Šlosar/Bauer 1986: 198–199). This development is usually attributed to Latin influence, but I personally would not exclude copying from German as well. However, this issue has to be discussed against a completely different sociolinguistic background, taking into account the situation of Czech in the 17th century.

In the following I will take a closer look at the periphrastic future and the coexistence of several past tenses in Old Czech. The future tense formed with budu is a Czech innovation, in the sense that it is not attested in Old Church Slavonic, nor in other ancient Slavic languages like Old East Slavic. It can be found in Czech texts from the very beginning (cf. Rössler 1952: 121–124), and it seems to have been exported to other Slavic languages like Polish, Ukrainian and Russian (cf. Moser 1998: 303–330). Since the combination of the future tense of the verb ‘to be’ with the infinitive is not very plausible in Czech, whereas the German construction can be explained by the older form of werden and the present participle, Rössler (1952: 142–143) formulated the hypothesis that the Czech construction came into being through German influence. This hypothesis was challenged by Křížková (1960), who showed that the combination with the infinitive was predominant in Czech from the beginning, whereas in German it was established later (towards the end of the 14th century). The same opinion is to be found in historical grammars of Czech like Lamprecht/Šlosar/Bauer (1986: 196). Leiss (1985) proposed another hypothesis, which took into account Křížková’s criticism of Rössler: According to Leiss the German werden future may have been grammaticalized under the influence of the Czech construction. Krämer (2005: 75–81)refutes this hypothesis with several arguments: She doubts that

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1 I thank Björn Wiemer for drawing my attention to this book.
the Old Czech construction was really the predominant way of expressing future tense and thinks that it may have been only one of several ways for quite a long time. She argues with the character of the language contact situation, in which Czech was the weaker partner and where we should not expect a loan construction from Czech in German. Furthermore she does not agree with Leiss’ idea that the werden construction spread from East Central German (which was spoken in Bohemia and the neighboring regions) to other dialects of German. Last but not least, she stresses the semantic differences between Czech budu and German werden.

In my opinion, we must acknowledge the fact that both languages used a number of alternative means to express the future tense for rather a long period, maybe until the end of the 14th century. If Czech speakers were confronted with the German construction of werden + infinitive, they may have copied it to their own language, using budu (which was used to express the future tense of ‘to be’) together with the Czech infinitive. One can even imagine that they misunderstood werden + a participle ending in -end as an infinitive, a form which was much more familiar to them than the participle. In any case the Czech construction may have come into being as an example of replica copying, and it may then have prevailed over other constructions which were more complicated or polysemic (like other future periphrases with modal verbs like chitiiti ‘to want’ or mieti ‘to have’). In any case it seems plausible that the emergence of those two constructions which existed only in these two languages (before the budu future spread to other Slavic languages) is connected.

The coexistence of four past tenses in Old Czech (aorist, imperfect, perfect and pluperfect), which ended with the disappearance of the two synthetic tenses aorist and imperfect around the year 1400 (though conservative authors continued to use them nearly up to 1500), has always been interpreted as an internal development of Czech (and most other Slavic languages). The common opinion, which can be found e.g. in Lamprecht/Šlosar/Bauer (1986: 194–195), is that the periphrastic perfect, formed with the present tense of the copula and the past active participle with the suffix -l-, coexisted with the synthetic tenses for quite a long time but prevailed in the end because it was much more regular and “convenient” than the aorist and imperfect forms, which were characterized by a lot of homonymy (e.g. the 2nd and 3rd person singular were always identical) and irregularity. For a long time nobody saw any parallels to the German tense system, which consisted of a synthetic past, a periphrastic perfect and a periphrastic pluperfect. Nevertheless, one could try to draw parallels with the loss of simple past forms in High German Dialects, which occurred between the years 1450 and 1550 and is known by the term “Präteritumschwund” (cf. Lindgren 1957).

Typological accounts like Thieroff (2000) treat the Czech tense system as being in a different category from the German one. While German is characterized by the opposition of ANT:PRET (cf. Thieroff 2000: 281), Czech is an example of PFV:IMPV (cf. Thieroff 2000, 297). However, this description is valid only for the contemporary system. Old Czech possessed a regular pluperfect, which was
formed with a combination of the aorist or the perfect of býti ‘to be’ and a past participle (cf. Lamprecht/Šlosar/Bauer 1986: 245). Moreover, the aspect system was not yet the same as today. Lamprecht/Šlosar/Bauer (1986: 199–201) assume that the opposition of perfective and imperfective verbs was already grammaticalized in the 14th–15th centuries, but there are good reasons to be skeptical about this, at least if one bears in mind the description of the evolution of Russian aspect given by Bermel (1997).

Abraham and Conradié (2001: 12–16) make a similar point, although they argue more superficially, without mentioning the aspect opposition. Instead of this they see different degrees of analyticity in a scale which begins with South Slavic and ends with Russian, Czech and Polish standing in the middle. I am not sure if this is completely adequate, but I agree with the point that the North Slavic languages (with the exception of Sorbian) were affected by the “Präteritumschwund” in a similar way to the High German dialects (and some other Germanic languages).

The “Präteritumschwund” has been explained in several ways. Abraham and Conradié (2001) assume that discourse factors were crucial here and operated in different languages in the same way. Drinka (2003) advocates a monocausal explanation, in which the Latin have perfect is explained by Greek influence and the shift of perfects from anterior or resultative to preterital meaning is assumed to have originated in Parisian French. I am inclined to prefer the first explanation, but I do not think that this is important for a judgment about the relation between the development of Czech and German. We know too little about the loss of simple past forms in both languages and especially in the German dialects of the Bohemian Lands. Therefore we can only state that the “Präteritumschwund” occurred in both languages and was probably caused by the same factors. So we have here another case of convergence of Czech and German, which – to some extent – can be compared to the convergence of the phonological systems.

Let us now turn to the modal auxiliaries, a further area where language contact with German has played an important role in Old Czech. In this case the direction of influence is clear. In Common Slavic, modality was expressed by impersonal predicates or special constructions (e.g. the pure infinitive), and there was only one verb with a modal meaning, i.e. mogti ‘to be able’. Old Czech, on the contrary, has three more modal auxiliaries, dřebiti and musiti/musět’i ‘must’, jmi-eti ‘ought’. The first two of them are material copies from Middle High German durfen and műzen, the third is the equivalent of German soln. Porák (1967: 31–35) has showed that infinitival modal constructions continued to exist in Old Czech along with the “new” modal auxiliaries, but eventually lost ground. In Modern Czech these constructions sound archaic and are used rarely.

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2 I thank Johannes Reinhart for drawing my attention to this article.

3 If one is inclined to acknowledge a voluntative modality as well, another modal verb would be xstěti ‘to want’.
The two loanwords *drbiti* and *musiti/musěti* are attested from the oldest written texts. *Drbiti* is rather archaic and disappears quickly; *musiti/musěti* has been preserved up to the present. It also acquired epistemic usage later, e.g. Modern Czech *musí být nemocný* ‘he must be ill’. The modal auxiliary *jmíti* is not a calque from German (German *haben* can be used as a modal auxiliary, but with a different meaning) and Porák (1968, 99) explains it as a generalization starting from cases like *nejmáš dát* ‘you do not have what to give’ to ‘you shall not give’. I personally prefer the explanation of Němec (1979, 15) and Vykyipel (2010, 132) who explain the emergence of the modal auxiliary as the result of a syntactic transformation, which is typical of the pair *to be* and *to have*: The infinitival construction *jest mi jít*, literally ‘it is to go for me’, was transformed to *jmáš jít*, literally ‘I have go’, in the meaning ‘I should go’, in an analogous way as *jest mi duom* ‘it is a house for me’ and its transformed version *jmám duom* ‘I have a house’. By this process *jmíti* becomes the equivalent of German *sollen* and Czech acquires a further modal auxiliary.

Other West Slavic languages show a similar development. Slovak and Polish use the loanword *musiet/musieć* and the auxiliary ‘to have’ in a similar way (cf. Weiss 1987, Hansen 2001). Upper Sorbian preserved the older loan *dyrbjeć* in the meaning ‘must’.

There are several further periphrastic constructions in Modern Czech, e.g. the resultative construction with the auxiliary *mit* ‘to have’ and the past passive participle (cf. Giger 2003a), the so called “absentive” construction with the auxiliary *být* ‘to be’ and the infinitive (cf. Berger 2009b) or the recipient passive formed with the auxiliary *dostat* ‘to get’ (cf. Giger 2003b). All of them resemble German constructions: the first looks rather similar to German periphrastic perfect tense with *haben*, the second is reminiscent of modern German constructions like *er ist essen* ‘he is (away) to eat’, and the third resembles the German recipient passive like *er bekommt die Haare geschnitten* ‘he gets his hair cut’. Though there are good reasons to discuss the impact of Czech-German language contact on these constructions, they will not be discussed here since they are first attested much later than the other periphrastic constructions mentioned before.

**Language Shift from German to Czech after 1350 and its Consequences**

The Czech phonological system had been rather stable after the changes which occurred in the period immediately before the first longer texts were written. The only major development after 1300 was the change of *ó > uo*, which most authors date to the first half of the 13th century (cf. Lamprecht/Slosar/Bauer 1986: 105). New developments began at the end of the 14th century, and they changed the shape of the vowel system once more. These changes consisted of two subsequent processes, the diphthongization of *ú > ou* and *ý > ej* and the
monophthongization of \( ie > i \) and \( uo > ů \). Cf. the following examples: \( sůd \) ‘court of law’ > \( soud \); \( býk \) ‘ox’ > \( bejk \); \( bielý \) ‘white’ > \( bílý \); \( duom \) ‘house’ > \( dům \).

The changes did not affect the whole territory of Czech dialects (and did not advance to the Slovak dialects at all) and they were still going on during the period of the first printed books. For this reason the graphic realization of these changes is rather complicated. The grapheme \( ŷ \) continued to be used to render the diphthong /ej/ until the 17th century. From that time on scribes began to write \( ej \) in roots, but continued to write \( ŷ \) in endings. During the “revival” of Czech at the end of the 18th and the beginning of the 19th century the codification returned to \( ŷ \), with the effect that the literary spelling and pronunciation (!)today is \( býk \) and not \( bejk \). The digraphs \( ie \) and \( uo \) were used until the end of the 16th century and came out of use then.

The striking similarity of these processes to the diphthongization and monophthongization in Middle High German was observed very early. Gebauer (1894) mentioned it and Beer included these processes into his list of German influences. Nevertheless, the Czech historical grammars of the 20th century are very skeptical and try to give internal reasons for these developments. They argue that similar processes can be seen in other Slavic languages or dialects and they try to associate it with the loss of palatalization. For example, the first part of the diphthong \( ej \) is explained as a means to differentiate between \( ŷ \) and \( i \) after the palatal consonant before \( i \) was depalatalized. This explanation presupposes the presence of palatal consonants in that period and is in contrast to my assumption that the palatalization correlation was lost much earlier.

Havránek (1966) was the first to explain this development as a consequence of “language mixing”, e.g. the language shift from German to Czech, which the urban population underwent in the second half of the 14th century. His article was cited in historical grammars (e.g. Lamprecht/Šlosar/Bauer 1986: 108), but only in the sense that German influence was possible but could not be proven. In a 1998 study I re-opened the issue and argued in much more detail and with explicit reference to Thomason and Kaufman’s typology of language contact. I noted with interest that two other non-Czech scholars have given a similar interpretation of these changes, the American Slavist Pontius (1997) and the Polish Slavist Bednarczuk (2000), neither of whom cited Havránek or me. Šlosar (2006: 652) considers German influence as a possible reason for the diphthongization of \( ů > ou \) and \( ŷ > ej \), but maintains that the monophthongization \( ie > i \) and \( uo > ů \) should rather be explained by internal factors.

**Conclusion**

I hope to have shown that Old Czech underwent a number of changes which can be explained by language contact with German. These changes are not uniform but were caused by heterogeneous processes. A rather long period of time was characterized by intensive borrowing, not only of lexical items but also of gram-

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4 This is a purely historical convention to write the long vowel /ů/.
matical structures, and there were short periods of language shift, presumably around the time of Christianization and, definitely, in the second half of the 14th century.

It is difficult to decide if family effects played a role in the first period of language shift around the Christianization, since this period was characterized by a convergence of the phonological systems of both languages which were rather different before (with the exception of the quantity opposition). On the other hand family effects were very important during the period of intensive borrowing. Especially the borrowing of grammatical structures can be understood only against the background of an overall similarity of the core systems of nominal and verbal inflection, a similarity which was inherited from a common ancestor. During the second period of language shift in the second half of the 14th century family effects were not relevant any more, since the phonological changes of this period resulted from the previous convergence of phoneme systems and not from inherited similarities.

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