

HISTORICAL DIALECT SPLIT
AND LATER LANGUAGE CONTACT:
OLD BULGARIAN JAT' AND MODERN ENGLISH /æ/
IN MODERN BULGARIAN

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1. *Introductory notes*

Although it also deals with the effects of language contact on a specific instance of language innovation,¹ this paper is based above all on the familiar practice of using contemporary observable language data for the further elucidation of an earlier historical change, that is, 'the use of the present to explain the past', advocated by a number of authors (e.g. Labov 1972; Martinet 1974). As indicated by the title, a comparison is drawn here between the Middle Bulgarian split of the Old Bulgarian jat' vowel (spelled with the Cyrillic ѣ letter before the 1945 spelling reform) and the present-day Bulgarian adaptation (in loanwords and learner interlanguages) of the Modern English /æ/ (some diachronic aspects of the latter vowel have been considered too).² The comparison of the relevant data from these time-sequentially (Old, Middle and Modern Bulgarian, and Old, Early Modern and Modern English) and interactionally (Modern English and Modern Bulgarian) related languages offers some interesting insights and suggests certain interferences which will be considered at some length. Some of the more general theoretical and methodological aspects of the issues raised here will briefly be examined too.

¹ Together with Andersen (1974: 22) I adhere to the distinction Coseriu makes between 'innovation' and 'change', where the latter involves the generalization or codification of the former. However, the term 'change' is occasionally also used here in its broader sense which includes 'innovation.'

2. Notational problems

Before proceeding it will be necessary to explain some notational decisions concerning the phonological transcription of *jat'* in Modern Bulgarian and of /æ/ in Modern English.

2.1. The transcription of *jat'* in Modern Bulgarian

It has repeatedly been pointed out that the reflexes of Old Bulgarian *jat'* after palatalized² (the familiar alternative terms being 'soft' or 'sharped') consonants in Modern Eastern Bulgarian (on which Standard Bulgarian is mainly based), e.g. in a word such as бял 'white', can be transcribed either as /a/ preceded by a palatalized consonant (traditionally indicated by an apostrophe), i.e. /b'al/, or as a consonant followed by /j/+a/ (= /ja/),³ i.e., /bjal/. Indeed, as pointed out by H. Andersen, "the question of whether to interpret such transitions as part of the labials or as separate following segments is one of the traditional dilemmas in phonemic analysis" (Andersen 1974 : 35).

The proponents of the /C'+ja/ solution (e.g. Merlingen 1957; Van Campen and Ornstein 1959; Pašov 1964; Nikolov 1970; Danchev 1978) usually point to the distributional limitations of the palatalized consonants. In native words palatalized and velarized stops are in complementary distribution, the former occurring before front vowels and the latter elsewhere. No palatalized consonants are therefore found word finally and before consonants. Given such constraints on their distribution, their phonemic status seems uncertain. At best such a consonant could qualify as what Dressler (and other authors — cf. the discussion and references in Danchev 1975 : 69—74) has described as a 'quasi-phoneme', i.e., "a segment which behaves like a phoneme according to some, like an allophone according to some other criteria" (Dressler 1982 : 119). Besides, the acceptance of independent palatalized consonant phonemes leads to a considerable (nearly double) increase in the overall number of consonant phonemes in Eastern Bulgarian, which would suggest that the differences between the two main varieties (Eastern and Western) of Bulgarian today are more significant than they really are. Owing to the constant infiltration of Western dialectal features into Standard Bulgarian (due mainly to the fact that the capital Sofia is situated in Western Bulgaria — for a study of the interdialect of Sofia cf. Videnov 1982) it is becoming increasingly difficult nowadays to pin-

² The distinction between 'palatalized' (in which only the secondary articulation is affected) and 'palatal' (where the primary articulation is affected) consonants, made by various authors (e. g. Rosetti 1957; Bhat 1974) is maintained here.

³ The problem of whether the /j/+a/= /ja/ sequence should be analyzed as one or two phonemes is not considered here. For references and discussions of such cases cf. e. g. Andersen 1972; Danchev 1975.

point the difference, made by some authors, between the Western and Eastern pronunciations of words such as бял, etc. It should be added that the blurring of such differences applies to the pronunciation of all consonants before /ja/, not just of labials. As regards acoustic and perceptual data, an extensive recent study by Tilkov of the palatalized consonants has confirmed the observations of earlier authors that the feature of palatality is signalled mainly by the yod-like glides rather than by the consonants themselves (with the exception of the velars /k/, /g/, /x/ and the lateral /l/ — for details cf. Tilkov 1979).⁴

In his survey of the arguments in favour of the /C'+a/ notation Tilkov points to the fact that though coming close to /j/, the palatal glide is not a real yod after all, because it lacks its formant 1 characteristics. This argument can be countered by calling attention to the fact that the coarticulation of any sound usually differs from its independent articulation. A phonological point made by various authors is that in foreign borrowings palatalized consonants occur before /a/, /o/ and /u/ and thus give rise to contrasts which are taken as evidence for the existence of palatalized phonemes in Modern Bulgarian. Although loanword phonology naturally can provide very important insights (cf. the discussion further on in this paper §§ 5.1; 5.5), it is hardly sufficient as the *only* criterion for determining the basic phonemic inventory of a language. Nevertheless, despite all counter-arguments, the traditional approach in Bulgarian (and generally in Slavic⁵) studies has been to accept, one might say often practically unquestioningly, the /C'+a/ solution.

As an additional circumstance in favour of the /C'+ja/ solution one can mention the parallelism of the /æ/>/ja/ change with some other similar instances of what can be described as analytical linear decomposition such as /ü/>/ju/ and /ö/>/jo/, which are not necessarily dependent on a preceding consonant (cf., e.g., the Bulgarian rendition of German words such as 'über' → *juber* and of French names such as Eugénie → *Joženi*; for details cf. Danchev 1985). Therefore instead of the traditional /C'+a/ sequence the /C'+ja/ solution has been adopted here.

It could further be argued, of course, that the two alternative notations boil down to much the same thing, which has variously been referred to as a 'long component' (Harris 1944), 'prosody' (in terms of Firthian phonology), 'group phoneme' (Žuravl'jov 1966), 'ambiguous sequence' (Andersen 1974 : 35), 'continuum of simultaneity' (Bhat 1974), etc. (the diffusion of a distinctive feature through two (or more) segments has recently also been tackled in so

⁴ According to Bhat (1970) velar consonants are most vulnerable to palatalization by front vowels, but not by /j/, which seems to explain the emergence and retention of the yod glide after velar consonants (cf. also the data in § 4).

⁵ So as to avoid the use of both 'Slavonic' (British usage) and 'Slavic' (American usage) the latter form, which occurs in quotations from other authors, has been used throughout this paper.

called 'autosegmental' phonology). If such a more integrative standpoint is adopted, both symbols — *j* and the apostrophe (') — would emerge as roughly equivalent, with the difference that the yod is typographically more conspicuous, thus helping to distinguish more clearly the /ja/ reflexes of 'jat' from some straightforward /a/ reflexes in some Western Bulgarian subdialects.

2.2. The transcription of /æ/ in Modern English

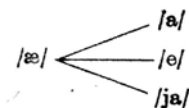
As is known, the symbol /æ/ stands for a number of different monophthongal and even diphthongal sounds in English (for details on the various regional and social variants of /æ/ in Modern English cf., e.g., Kurath and McDavid 1961; Labov 1972 (and the references there); O'Connor 1973; Wakelin 1977; Wells 1982), most of them with both short and long variants. Therefore, from the point of view of English as a composite notion, which is often an inevitable idealization of data in broadly based language contact studies, /æ/ is evidently a mere approximation which conceals, perhaps more so than in the case of most of the other vowel phonemes of English, a great deal of variation.

In cases of language contact in which it is not always quite clear what variant of the donor language has been involved, it might therefore be more expedient to adopt a notation which would include as many as possible of the main variants the speakers of the receptor language are likely to have heard. Thus, for example, although various approximations of R. P. British English are normally taught in Bulgaria, Bulgarian learners have occasionally also been exposed to other varieties of British English (e.g. Scottish English), as well as American English (in the past through the mediation of the American schools in Bulgaria and some neighbouring countries and more recently as a result of the spreading international importance of American English at the expense of British English). This is why for the Modern English complex /æ/ phoneme it would probably be better to use an expanded / [a], [æ], [e] / notation (as, e.g., in Danchev 1979/1982), which would reflect the main pronunciation types of this vowel in the English speaking world today (a further expansion of this composite notation would also include the lengthened and diphthongal variants of /æ/), where [æ] figures as the central (and representative) allophone, whereas [a] and [e] stand for various regional pronunciations (e.g., /a/ in Midland and Northern English, /e/ in Southeastern and so called 'Southern Hemisphere' English, etc.). As suggested by the above use of brackets, what are allophones in the idealized composite notation will figure as independent phonemes when considered within the respective varieties of English. The theoretical justification of such a complex notation runs easily into difficulties (among other things it obviously violates the biuniqueness principle of taxonomic phonology), but its practical utility tends to override the theoretical obstacles. In any case, for the sake of convenience the simpler /æ/ will be used, but with

the proviso that it is considered as a shorthand symbol for the composite / [a], [æ], [e] / notation.

Although this notation would seem fairly adequate from the point of view of Modern English, from a historical perspective it could be expanded to include also the diphthongal /ja/ pronunciations after /k/ (and its voiced counterparts) that probably occurred in Old English (for a brief overview of the problems in describing palatalization in Old English cf., e.g., Bauer 1973) and recurred in Early Modern English (with different output though), when pronunciations such as *cyan* (/kjan/) for *can* (/kæn/) were actually recommended by orthoepists such as Wallis (1653), Elphinston (1665) and Walker (1791) and repudiated by Nares (1784) and other later authors (these data are from Horn and Lehnert 1954 : 1007–1010) as manifestations of affected speech (e.g. on the stage). It is interesting to note that while Nares opposed vehemently the /kj/ and /gj/ pronunciations in *kind*, *car* and *garden*, he accepted them before /æ/ in *captain* and *garret*. The later sociolinguistic markedness of the palatalized forms was exploited by B. Shaw (e.g. in his pronunciation of *careful* in the linguaphone recording of his essay on broken English). Although they have died out in Modern English, such forms, either as reflexes of the Early Modern English palatalization or as a new development, occur in various overseas varieties of English, e.g. in some Southern American dialects (Krapp 1925), in Jamaican English (Wells 1982) and elsewhere (in addition to the data and references in Horn and Lehnert 1954 cf. also Dobson 1957 : 952).

If the Standard English /æ/, which coincides with the original historical input (irrespective of whether it is considered as the direct continuation of the Old English state or as a later development) is left out, the following diachronic fan can be set up for British English:



The /a/ has been ranked first because beside its spread in extensive areas it has also been identified as the pronunciation favoured by the younger generation (cf. the references at the beginning of this section, and also Samuels 1972). There are, of course, varieties of English in which the /e/ variants will come first. However, at this juncture we are concerned more with the inventory of the respective sounds than with their frequency ranking. In any case, the /ja/ pronunciation trails far behind.

The diphthongal /ja/ pronunciation being statistically unimportant, the basic pattern therefore consists of a bifurcation (of the type described by H. Andersen), the elements of which are the logical alternatives of one another. And, as Andersen remarks, such alternatives "are often realized in different parts of

a language area when dialects diverge" (Andersen 1974 : 29), which obviously fits the data in this case. As regards the full pattern, there obtains a trifurcation which can be regarded as two consecutive bifurcations (cf. Andersen 1974 and the discussion after his paper).

3. The *jat*' vowel

To begin with, a brief look at the basic data. It is a matter of common knowledge that the phonetic value of what is usually referred to as the Common Slavic *jat*' vowel has long been a bone of contention among linguists. The issue is conveniently summed up by Samilov as follows:

Slavic comparative grammar has established a phoneme ĵ in reconstructed Common Slavic. There is considerable consensus as to its predecessors in late Indo-European and its reflexes in the modern Slavic languages and dialects. What is controversial is its phonetic value before the disintegration of the Common Slavic unity. One of the main reasons for disagreement is the extreme diversity of the reflexes of *jat*' (...). The reflexes range from *a* in South West Bulgarian to *i* in ikavian Serbo-Croatian and the estimates of its phonetic value in Common Slavic are almost as diverse (Samilov 1964 : 11).

The phonetic value of the *jat*' vowel in Old Bulgarian (insofar as Old Bulgarian differs from Common Slavic) has also given rise to inconclusive debates. Whereas most authors assume a broad pronunciation of *jat*', opinions diverge as to whether this was an /æ/-like monophthong (in Zlatanova 1986 : 69 it is explicitly equated with I.P.A. [æ] and in Regier 1977 : XV it is even compared to English /æ/ in *bad*) or a diphthongal /ja/ (or /ea/)-like sound, and a number of authors seem to accept both possibilities (for an overview of the various hypotheses cf. Samilov 1964 and the references there; cf. also Aitzetmüller 1978; Gălăbov 1980; Velčeva 1980; Dobrev 1982).

Since both the historical and present-day data on *jat*' in Bulgarian are available in the literature (in addition to the above-mentioned publications cf. also Stojkov 1947; Scatton 1975; Tilkov 1982; Kočev 1986), only some of the main facts will quickly be recalled here.

The prevailing opinion is that some time during the Middle Bulgarian period (probably after the 12th century) the *jat*' was narrowed and raised to /e/ in the Western dialects and was backed and lowered to /a/ in the East, in the latter case forming what we saw could be viewed as a rising diphthong with the glide between the vowel and the preceding palatalized consonant. Allowing for various exceptions and deviations due to stress, morphological alternations, analogical levellings, dialectal mixing and cultural borrowing (from Old Bulgarian and Modern Russian), the present-day reflexes are still mainly /e/ in

Western and /ja/ in Eastern Bulgarian, the dividing line (the notion of 'line' is merely traditional, recent dialectological research — e.g., Mladenov 1973; Kočev 1980 — having revealed a broad belt of transitional and parallel variants) running from Goce Delčev in the South past Razlog, Pirdop and Pleven to the Danube in the North.⁶ In fact, this still constitutes the main dialectal division of Bulgarian today. As has already been noted, /a/ is to be met with in some Western subdialects (e.g., *sakam* 'I want' and *cana* 'price' → cf. e.g., Mladenov 1929/1979; Conev 1940/1984), and what would seem to be archaic /æ/ forms have been preserved in some Southern subdialects (cf. Čomonev 1986 and the references there).

The Modern Bulgarian /e/ reflexes of *jat*' are more frequent, because even in Eastern Bulgarian /ja/ (from *jat*') occurs only in accented position before hard syllables, e.g., *bjal* 'white' and *mjara* 'measure' and finally (e.g. in *vārvja* 'I walk'). The typical position of the *jat*' reflexes, especially in nouns, is interconsonantal. Before front vowels in the following syllable it is always /e/ (e.g. in *beli* and *meri*, the plural forms of *bjal* and *mjara*) in Standard Bulgarian. There are about 110 basic words with /ja/ (from *jat*') (Andrejčin 1044/1978 : 54).

To put it briefly, the Old Bulgarian (OB) words containing *jat*' in stressed positions normally have distinct Eastern and Western forms in Modern Bulgarian (MdB), e.g.:

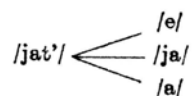
OB	Eastern MdB	Western MdB	
бѣль	bjal	bel	'white'
брѣгъ	brjak	brek	'bank', 'shore'
вѣра	vjara	vera	'faith'
млѣко	mljako	mleko	'milk'
снѣгъ	snjak	snek	'snow'
хлѣбъ	xljap	xlep	'bread'

a.o. (for more examples cf. the references cited so far). As has already been pointed out, there exist various exceptions, which will not be considered here. Suffice it to mention the circumstance that although the Eastern forms have been accepted as standard, the Western forms tend to spread. One of the main causes for this 'ekavization' process is undoubtedly the afore-mentioned fact that the capital Sofia is situated in Western Bulgaria.

The evidence can be summarized as follows. Leaving out the rare /æ/ reflexes (regardless of whether they continue or restore the older state), there emerges a basic bifurcation pattern. And if the /a/ reflexes are included, there

⁶ If the dialects spoken in Greece are included this would extend the dividing line as far South as Salonika. The evidence of Bulgarian loanwords in Dacoromanian suggests that in the past this line continued to the North as well (cf. Zaimov 1984).

obtains the following trifurcation:



in which the three *jat'* reflexés are ranked according to their frequency of occurrence in Modern Bulgarian. No hypothesis as to the nature of the *jat'* input will as yet be put forth. At this point it will only be noted that, allowing for differences of ranking, the reflexes of *jat'* in Modern Bulgarian coincide with the reflexes of OE /æ/ in Modern English (except for R. P. /æ/, of course — cf. § 2.2). Whether the identity of the righthand output elements of the two trifurcations implies an identity of the left-hand input elements (i.e., *jat'* = /æ/) is a question the answer to which will be deferred for a while.

4. The adaptation of English /æ/ by Bulgarian native speakers

Empirical evidence on the adaptation of the English /æ/ vowel by Bulgarian native speakers can be obtained from (1) the Bulgarian transcription (and pronunciation) of numerous English loanwords and proper nouns and (2) the speech production of Bulgarian learners of English.

4.1 English loanwords and proper nouns in Bulgarian

The most frequent adaptation patterns, well documented in both common and proper nouns, are *a* (/a/), *e* (/e/) and *я* (/ja/). Examples are:

a (/a/): *dansink* 'dancing floor', *džas* 'jazz', *gangster* 'gangster' (the I.P.A. transcription of some examples coincides with their English spelling), *mač* 'match' (in sports), *rali* 'rally' (with the meaning of a car race), *sandvič* 'sandwich', *tank* 'tank' (military), *tanker* 'tanker', *tramvaj* 'tram(way)', *traper* 'trapper', *Alan* 'Al(l)an', *Alabama* 'Alabama', *Alis* 'Alice', *Čatārlej* 'Chatterley', *Frank* 'Frank', *Gladston* 'Gladstone', *Kanzas* 'Kansas', *Lankastār* 'Lancaster', *Mančestār* 'Manchester', *Sam* 'Sam', *Stratford* 'Stratford', a.o. (for more examples in this and the following sections cf. Danchev 1979/1982; 1985).

e (/e/): *bek* 'back' (in football), *bekxent* 'backhand' (tennis), *brendi* 'brandy', *dendi* 'dandy', *keč* 'catch' (free-style wrestling), *plejбек* 'playback', *snekbar* 'snack-bar', *stent* 'stand', *xepient* 'happy end', *Bredbāri* 'Bradbury', *Džek* 'Jack', *Gecbi*, 'Gatsby', *Kentārbāri* 'Canterbury', *Medison* 'Madison', *Selin-džār*, 'Salinger', *Stenli* 'Stanley'.

я (/ja/): *kjatgut* 'catgut' (surgery), *sljabink* 'slabbing' (metallurgy), *sljānk* (this as well as some of the other examples have alternative variants

with *e* and/or *a*) 'slang', *Bljakpul* 'Blackpool', *Kjambāl* 'Campbell', *Saut-xjamtān* 'Southampton', *West Xjam* 'West Ham', a.o.

As displayed here the evidence reflects approximately the relative statistical importance of the possible three Bulgarian renditions of English /æ/, that is, /a/ ranks first, with /e/ and /ja/ respectively in second and third position. However, it should be borne in mind that in a number of cases the *a* might simply be due to transliteration in conditions of indirect borrowing via other languages, mainly Russian and French (for details cf. Danchev 1981; 1986b). Besides, in the more recent Bulgarian forms of proper names the *a* is also due to prescription (Danchev 1979/1982). Finally, the *a* in such Bulgarian forms can naturally also originate from English native speakers who have low and back allophones of /æ/ (cf. § 2.2).

Some of the *e* instances are possibly due to phonetic environment. Thus, for instance, a preceding dental, labial or velar consonant (for a similar distribution of the renditions of /æ/ in English loanwords in Russian cf. Holden 1980) seems to favour the /e/ adaptation. It must be noted that the spontaneous rendition (by people who are not familiar with prescriptive rules) of /æ/ in both proper and common nouns is mainly with /e/. The possibility of /e/ input must, of course, be taken into account as well.

The /ja/ renditions differ from the /e/ renditions in their higher palatalization degree.⁷ A preceding velar consonant and /l/ seem to constitute a particularly favourable environment for the /ja/ renditions (cf. also Tilkov 1979). More or less parallel cross-language developments can be seen in various other cases, e.g., in English loanwords in Russian (e.g., *sljabink* 'slabbing' (no /ja/ renditions are reported in Holden 1980), and cf. also the reference in Mladenov 1929/1979 : 97 to the Russian *кян* (/kjan/) and *мян* (/mjān/) transcriptions of English 'can' and 'man'), some of the languages of India (e.g. *kjap* 'cap' — for more examples cf. Schuchardt 1819/1980), Sierra Leone Krio (Berry 1961) a.o. Worth noting also is the very similar manner in which Nupe (a West African language) treats /ɛ/ in loanwords from Yoruba (another West African language) — for details cf. Hyman (1970) and also the discussion further on in this paper (§5.5). Such innovations are to be met with also as an internal development. Thus, for example, in addition to the palatalization processes in English, mentioned earlier in this paper (§2.2.), similar developments have been observed in a number of other languages as well (cf., e.g., the data in Bhat 1974).

Although the evidence of this corpus illustrates the range of the various adaptations of English /æ/ by native speakers of Bulgarian, that is, a trifurcation into /e/, /a/ and /ja/, it offers practically no clues to their dialectal distri-

⁷ The higher palatalization degree may help to explain the /t/ > /k/ change (e. g., in *brākja* < *bratja* 'brothers') in some Bulgarian dialects).

bution. More reliable information in that respect can be obtained from the speech production of Bulgarian learners of English, considered in the next section.

3.2. The speech production of Bulgarian learners of English

Two types of evidence are available here: (1) auditive data from oral speech production and (2) spelling errors in written work (mostly dictations).

3.2.1. Auditive data

The auditive data, consisting of classroom observations made in the course of several years, are fairly extensive. Here is a selection of examples:

English input word	Bulgarian output variants
back	bek, bjak
black	blek, bljak
can	ken, kjan
cat	ket, kjat
flat	flet, fljat
gap	gep, gjap
lab	lep, ljap
map	mep, mjap
nap	nep, njap
that	ðet, ðjat

Constant checks on the dialectal background of the respective learners have revealed that the /e/ forms are usually produced by learners from Western Bulgaria and the /ja/ forms by learners from Eastern Bulgaria. In fact, this has proved to be an almost infallible test for dialectal background identification.

The /e/ forms turned out to be more frequent, occurring in the production of some Eastern learners as well. This is probably due to the fact that /e/ (from jat') is generally more frequent than /ja/ (from jat') — cf. the evidence in §3 — owing to the general ekavization process and also to the interesting fact that the /ja/ adaptation has lower prestige value (this despite the circumstance that such a pronunciation in Bulgarian can be motivated quite adequately from a linguistic point of view — for details cf. Danchev 1979/1982; 1985). The most likely explanation for this stigmatization is that yod insertion before front vowels is a dialectal feature in Modern Bulgarian (and is presumably extended to /æ/= /ja/) which is often exploited for expressive purposes (curiously, practically the same pejoration developed with the palatalized forms in early Modern English, mentioned in §2.2). But there is hardly any doubt that the

primary and spontaneous Bulgarian rendition of the English /æ/ vowel is basically with /e/ or /ja/, whereas /a/ falls far behind, mostly in examples that can be identified as instances of graphic influence. It should be noted that this distribution differs markedly from the distribution in loanwords and proper nouns in the preceding section, where the /a/ adaptation was seen to come first. The correct /æ/ pronunciation is usually mastered only by learners who have been subjected to special phonetic exercises over longer periods of time. This despite the fact, already referred to, that Bulgarian learners of English are exposed mostly to the [æ] allophone of the complex /æ/ phoneme.

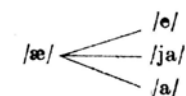
4.2.2. Spelling data

The spelling data (some of them taken from Moskovska 1983) abundantly illustrate the confusion of /æ/ with /e/ and vice versa, reflected in errors such as *beck*, *beg*, *exctly*, *flet*, *gled*, *peck*, *reg*, *thet* instead of *back*, *bag*, *exactly*, *flat*, *glad*, *pack*, *rag*, *that* and *badroom*, *bravity*, *halp*, *hasitate*, *rander*, *sand*, *sat*, *than* instead of *bedroom*, *brevity*, *help*, *hesitate*, *render*, *send*, *set*, *then*.⁸ Although such errors are typical of beginners, intermediate and even advanced learners are not immune against them.⁹ Probably owing to the largely unconscious nature of the /ja/ adaptation (the learners thinking that they pronounce a monophthong) no diphthongal spellings of any kind (e.g., *ia* or *ya*) have been recorded so far.

5. The Bulgarian adaptations of English /a/: some interferences

The fact that dialectal background may colour the preception and production of the sounds of a foreign language has, of course, been observed and discussed before (cf., e.g., Viereck 1983), but in this case it assumes additional interest from several points of view.

The data in section 3 can be presented as follows:



⁸ The possibility that the learners may have confused *bad* — *bed*, *sand* — *send*, *sat* — *set*, etc., on semantic grounds was ruled out contextually, but just to be on the safe side special checks were made in a number of cases.

⁹ Thus, for example, a group of third year students of English (most of them with an English language school background) at Sofia University had to write an essay on the saying 'brevity is the soul of wit'. Quite a few students heard and wrote **bravity*, a potentially possible, but so far non-existent derivative of the adjective 'brave'. Those students naturally wrote their essays along entirely different lines.

The ranking of the right-hand vowels reflects their frequency in the Bulgarian English interlanguages (cf. also Danchev 1980/1984). Except for the ranking, this trifurcation coincides with the trifurcations of the diachronic development of /æ/ in English (§ 2.2) and of the Modern Bulgarian reflexes of the Old Bulgarian *jat*' vowel (§ 3). We shall return to this circumstance in the final discussion.

The fact that Western Bulgarian learners of English identify /æ/ with /e/ can be accounted for in more than one way.

As regards perception, it has been observed that when a learner cannot identify the relevant phonetic properties with a corresponding combination of distinctive feature values, he imposes on them a hierarchy of his own, disregarding some, while regarding others as sufficient to consider them as a possible realization of an already acquired phoneme (Andersen 1974 : 38). This is why when the English /æ/ is processed through the phonological sieve (to use Trubetzkoy's well-known and frequently cited metaphor) of Bulgarian, it comes out as /e/, one of its relevant features (+low) having been disregarded. Predictably, this happens to be the dominant rendition of English /æ/ by the speakers of many other languages as well, both in loanwords and learner interlanguages (cf., e.g., the evidence in Fisiak 1968; Wode 1980; Filipović 1982; Zybert 1983). The /æ/ being a more highly marked vowel than /e/ (cf. the discussion below), such an adaptation emerges as quite natural.

Phonologically, this can be regarded as a case of allophonic overlapping. The front allophones of the English /æ/ phoneme coincide more or less with the Western Bulgarian open /e/, which is gaining ground in Standard Bulgarian (at least as spoken in Sofia — cf. Kočev 1986). Using the terminology of Martinet (1955) it can be said that the dispersion fields of the two vowels overlap, which obviously creates conditions for /e/ renditions of /æ/.

The /e/ adaptation by Western Bulgarian learners can be better understood also in the light of acoustic measurements. Whereas English /æ/ is closer to Bulgarian /a/ in formant 1 — the values reported by various investigators range from 713 to 750 and 513 to 770 cps respectively, it is closer to /e/ in formant 2, the values being 1615—1746 and 1675—2193 cps (for details cf. APPENDIX). According to most authors (e.g. Lindner 1969) formant 2, where English /æ/ and Bulgarian /e/ come quite close, is more relevant for the recognition and identification of front vowels.

Concerning the /ja/ adaptation by Eastern Bulgarian speakers of English /æ/, it is a well-known fact that in conditions of language contact simultaneously articulated combinations of distinctive features in the source language can be redistributed into a linear sequence in the receptor language (in addition to the references in Danchev 1985 : 89, cf. also Andersen 1974). The feature of palatality has been preserved, but instead of paradigmatically, it has been restructured syntagmatically, with the result that instead of one (as in the in-

put forms), the output forms have two segments. This is apparently due to the higher palatalization degree of the Eastern Bulgarian consonants in such positions. The /ja/ adaptation in the speech production of Eastern Bulgarian learners occurs after practically all consonants (cf., however, the preferences mentioned in § 3.1) and the only constraint on its distribution seems to be that it does not occur initially or finally, as was seen to be the case also with common and proper nouns (§ 3.1), undoubtedly for the same reasons. Some intermediate and advanced learners tend to replace the /ja/ with /e/ or the correct /æ/.

As has already been pointed out, the /ja/ adaptation provides an interesting parallel to the similar adaptations in various contact situations of the complex /ü/ and /ö/ vowels into rising /ju/ and /jo/ diphthongs (alongside their simplification into various monophthongs → for details cf. Danchev 1985), which is an analytical decomposition in the receptor language of 'difficult' elements in the source language. The phenomenon is well attested and fits into a global pattern of the syntagmatic decomposition of paradigmatically complex elements, mentioned above and elsewhere.

The /e/ and /ja/ adaptations are easily explained also as simplification strategies in situations of language contact and language acquisition. The /e/, /j/ and /a/ sounds are less marked typologically than /æ/¹⁰ and the cross-language adaptation of the latter can be regarded as a typical instance of change from more marked to less marked language elements.¹¹ It must be pointed out that although in Chomsky and Halle 1968 : 409 the same complexity index → 2 → is assigned to both /æ/ and /e/, the former vowel actually turns out to be more highly marked, in fact meeting all the more important markedness criteria such as language acquisition, performance errors, historical changes, frequency (according to the UCLA Phonological Segment Inventory Database in terms of languages (the overall sample consists of 317 languages → for details cf. Maddieson 1984) the sounds considered in this paper have the following frequencies: /c/ — 113, /ç/ — 116, /æ/ — 38), neutralization, perception, aphasia, creolization, distribution, etc. (for details cf., e.g., Mayerthaler 1982 : 216—218; Lass 1984 : 132).

¹⁰ Whether /ja/ is considered as more marked or less marked than /æ/ will depend on whether it is treated as one phoneme or as a biphonemic unit (cf. Note No. 3). The traditional approach in Bulgarian studies has been to regard it as biphonemic.

¹¹ In this and some other places in this paper the reference to 'more' and 'less' marked is not necessarily interchangeable with the 'marked'/'unmarked' distinction. As has been pointed out, "the first applies essentially in contexts of neutralization, where a binary distinction neutralizes in favour of one member, termed 'un-marked'. The second applies among non-binary distinctions displaying degrees of markedness..." (Rutherford 1982: 88). Although this more universalist formulation has been accepted here, it does not automatically imply the rejection of the binarism principle, a discussion of which is avoided in this paper.

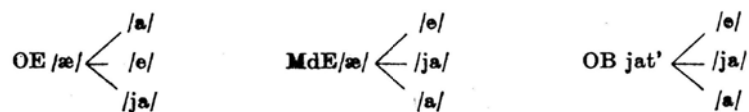
If together with Diensberg (1984) we accept that diphthongs are more marked than monophthongs, /ja/ in its turn can be regarded as more marked than /e/. Together with other instances of yod insertion (e.g. the Eastern Bulgarian /je/ pronunciation for the Standard Bulgarian /e/ from all sources) the /ja/ reflex of the Old Bulgarian jat' vowel and the /ja/ adaptation of Modern English /æ/ by Eastern Bulgarian native speakers conform with the common Eastern Slavic palatalization, which includes also some non-Slavic languages from that area (Jakobson 1938/1972 : 249).

6. Final discussion

The comparison of the dialectal split of Old English /æ/, of the Old Bulgarian jat' vowel and of the present-day Bulgarian adaptation of English /æ/ invites comment on a number of issues. The following points would seem worth considering.

6.1. The phonetic value of Old Bulgarian jat'

It was seen that in three different languages, namely English, Bulgarian and what has been referred to as the Bulgarian English interlanguage (BEIL), there obtains the same inventory of sounds in practically identical (disregarding, for the time being, some differences in ranking) trifurcations:



Predictably, the trifurcations in Modern Bulgarian and the Bulgarian English interlanguage coincide in their ranking too, whereas the trifurcation in English shows different ranking (as pointed out by Andersen, it is in their ranking of distinctive features that languages differ above all).

It will be recalled here that although typological evidence is generally admitted as a heuristic tool nowadays, it has probabilistic value only. But even so it can obviously help to render a given solution more plausible than an alternative one. The question now is: to which of the two hypotheses → OB jat' = =æ/ or OB jat' = /ja/ — the evidence considered in this paper lends support. The comparison of the above trifurcations prompts one to opt for the former possibility, i.e., Old Bulgarian jat' was an /æ/-like monophthong. Broadly speaking, the fact that three chronologically widely spaced processes have identical output does not, of course, necessarily imply also identical input.

And yet in this particular case it is difficult to envisage anything else than /æ/ as input for /e/, /ja/ and /a/. This reasoning is based on the similarity of the three trifurcations and generally on typological considerations in the sense that /æ/ > /e/, /æ/ > /a/ and /æ/ > /ja/ are more likely changes (all of them were seen to be well documented) than /ja/ > /e/ and /ja/ > /æ/ (though rare, the change of /ja/ to /a/ is attested in the corpus). Taken together, these considerations lead one to the conclusion that Old Bulgarian jat' must have been an /æ/-like monophthong.

It remains to be seen, however, how such a conclusion can be reconciled with the facts that (1) the same letter was used in the glagolitic alphabet for both /ja/ and jat' and (2) that all three reflexes — /e/, /ja/ and /a/ — of OB jat' in Modern Bulgarian — occur also in Old Bulgarian loanwords (common and proper nouns) in Romanian and Greek. Romanian having been under strong Slavic influence at all levels, including phonology, over a long period of time (cf., e.g., Zaimov 1984), the most relevant examples are in Greek. That the Greek replicas of the Old Bulgarian words containing jat' should have /e/ and/ or /a/ is only too natural, but the /ja/ renditions (e.g., in common nouns such as *astrjaxa* 'roof', *gasjanica* 'caterpillar', *koljanica* 'breeches' and a number of toponyms transcribed with Greek letters in Byzantine texts — for examples cf. Vasmer 1941; Gălăbov 1962; Samilov 1964) pose a bit of a problem. The question is whether the /ja/ forms were taken over from Old Bulgarian or whether they developed in the receptor language as an adaptation strategy for processing the unfamiliar /æ/ vowel (the same problem arises with some Old Bulgarian loanwords in Albanian). Neither of the two possibilities can be rejected out of hand and this takes us back to the hypothesis of Old Bulgarian jat' having been a diphthongal sound.

The issue seems to result in a stalemate, or, at best, to confirm the possibility, accepted by some authors, that there must have existed parallel monophthongal and diphthongal variants of jat'. A variationist model, which would envisage the coexistence of /æ/ and /ja/ for Old Bulgarian jat', would thus seem in order. As an elaboration of the existing views one can assume that even within such a variationist model /æ/ could still be regarded as the primary source (presumably in early Old Bulgarian) of the later diphthongal variants. From a typological point of view a similar picture is offered by the early Modern English palatalization of velars before /æ/ (and the other front vowels), already discussed in § 2.2, which soon acquired sociolinguistic markedness. Interestingly, a similar formula is suggested by Samilov (1964), who envisions the possibility that the use of /æ/ or /ja/ could originally have been conditioned stylistically and by concomitant changes in speech rate. The correlation of palatalization with phonostylistic functions and speech tempo changes has already been reported by a number of authors in other languages too (cf., e.g., Bhat 1974; Rubach 1978).

6.2. The jat' division as a living process in Modern Bulgarian

The fact that in assimilating loanwords, in this case from English, as well as in learner interlanguages, Bulgarian native speakers adapt the /æ/ according to their dialectal background — to /e/ and respectively to /ja/ — indicates that despite certain ekavization trends the jat' division is still a living process in Modern Bulgarian. This is contrary to the views voiced occasionally by some authors in connection with the ongoing discussions of the spelling problems generated by the Modern Bulgarian jat' division and the abandonment of the letter ѣ (which accommodated both the /ja/ and /e/ pronunciations) in the 1945 spelling reform (for an overview of the problem cf., e.g., Popov 1973).

6.3. The language contact factor

The possibility of external influence has been envisaged by some authors in order to explain the Western Bulgarian /e/ reflexes of Old Bulgarian jat' (cf., e.g., the reference to Serbian influence in Samilov 1964 : 141). The issue has at least two different aspects. To begin with, given the centuries long language contacts in the Balkans which have led to linguistic convergence (the well-known Balkan Sprachbund features) at all levels, including phonology, it is more apposite to speak of mutual influences, so called 'contact innovations', which arise "when the codes of addresser and addressee differ, and either interlocutor adapts his grammar to the other's usage" (Andersen 1974 : 22). These are obvious interlanguage phenomena (in terms of Selinker 1972 and generally of the extensive literature on error analysis: as a matter of fact, the above statement reformulates observations on learner strategies made by numerous applied linguists), in the first place simplification (cf. also the evidence in Danchev 1986a).¹²

From this angle it is easy to see why a more highly marked vowel such as /æ/ should have been changed (i.e., simplified) into a less marked vowel such as /e/. In fact, such a change is quite natural and even predictable.

Secondly, as is well known, /æ/ is a historically relatively unstable vowel which is apt to change to /e/ even without outside influence, that is, as an internal 'evolutionary' innovation (in terms of Andersen 1974).

To sum up, there is no paucity of possible plausible explanations for an /æ/ > /e/ change.

¹² The reverse development — elaboration (in certain contexts also referred to as 'decreolization' or 'accumulation of phonetic detail' (e. g. in isolated areas — cf. Andersen 1986), e. g. the retention and/or development of /æ/ in some Bulgarian subdialects Čomonev 1986).

6.4. The synchrony vs. diachrony dichotomy

Even though this issue may already appear trivial to some authors (cf., e.g., the brief comment in Dressler 1982: 93), the evidence nevertheless tempts one to emphasize once again that from a more general methodological point of view the coincidence of historical changes with cross-language innovations observable today further strengthens the spreading conviction among linguists¹³ that the rigid separation of synchrony and diachrony is largely unproductive (Danchev 1974; 1984). An integrated synchronic and diachronic approach is often indispensable, especially in language contact studies as well as in historical dialectology. In this (and other similar cases) the language contact data obviously provide a likely analogue of the much older historical change.

6.5. The adequacy of the linguistic models

Let us now briefly consider the adequacy of the specific linguistic models that can be used in a study of this kind. In addition to a variationist approach, already mentioned above, the necessity of an integrated synchronic-diachronic model evidently implies a panchronic generative model (or at least description — cf. Dressler 1982 : 98). However, this would involve the elusive notion of underlying phonemic representations. Let us take a look at some of the options. Thus, e.g., the historical data have led some authors to envisage /æ/ as the underlying phoneme of the /e/ ~ /ja/ alternation in Modern Bulgarian (cf., e.g., Scatton 1975).

It is worth noting that practically the same solution was chosen in a somewhat similar contact situation involving Nupe as receptor and Yoruba as source language (§ 3.1). According to Hyman since Nupe speakers consistently nativize [Ce] as [C^ya] the phonemic representation /e/ which does not exist phonetically in Nupe) is therefore real and he further claims that in borrowing the Nupe speaker extrapolates /e/ on the basis of the processes relevant to the respective vowels. The Nupe speakers have perceived the foreign words as equivalents of their own deep representations and have applied their own phonological rules to them (Hyman 1970 : 63—76). As can be expected, Hyman's claim has been challenged (cf., e.g., the discussion in Crothers 1973).

The assumption of an underlying segment that does not occur phonetically¹⁴ evidently implies an abstract solution, i.e., what has variously been refer-

¹³ This obviously applies less to the linguists of the various generative-transformational persuasions who are not particularly bothered by the Saussurian synchrony — diachrony antinomy.

¹⁴ A certain justification for accepting /æ/ as an underlying representation in Modern Bulgarian could be derived from the fact that /æ/ occurs phonetically in some Bulgarian dialects (cf. Čomonev 1986).

red to as 'absolute neutralization' (Kiparsky 1968), 'imaginary' segment (Crothers 1973), etc. This approach undoubtedly offers a useful descriptive device which permits an economical integrated description of developments that may otherwise be seen unconnected. On the other hand, it is of course open to all the criticism that have been levelled against abstract phonemic representations in phonology.

Without entering here into all the ramifications of the abstractness controversy in phonology (for an overview of this interesting issue cf., e.g., Fischer-Jørgensen 1979), one may take up just a couple of relevant points. Thus, for example, various authors have reasoned that in appealing to simplicity it remains unclear to what extent imaginary representations are in themselves simple or complex, and whether they are not, in fact, instances of "false simplification" (Crothers 1973 : 5). Indeed, one of the main arguments against accepting /æ/ as an underlying phoneme of /e/ (from jat') in Modern Bulgarian would seem to be its higher markedness, the language acquisition process usually proceeding from less marked (i.e., 'easy') to more marked (i.e., 'difficult') elements and structures (for a correlation of the markedness and 'difficulty' notions cf. Eckman 1978). Some authors have required empirical evidence for proving the psychological reality of underlying representations (e.g. Cena 1978). Though not obtained in any guided experiments of the type described by Cena, the empirical data adduced in this paper suggest that the /e/ ~ /ja/ alternation is still productive in Modern Bulgarian (cf. also § 5.2) and therefore reflects a psychologically real generalization, which the speakers of Eastern Bulgarian transfer to their processing of the Modern English /æ/ vowel. This is all very well, but it still begs the question of why /æ/ should be singled out as underlying representation, except as some kind of a convenient common denominator. Pending further experiments and data the basic question posed in this section will go unanswered. Nevertheless, both the historical and the language contact data undoubtedly provide certain pointers for speculating on the partial or complete (Cena 1978) psychological validity of such a model, contentious as this topic may be.

Whereas on the one hand the evidence seems to be handled best by a generative description, certain aspects of the English-Bulgarian contact situations seem to require the use of the classical phonemic notion, which confirms the opinion that "surface structure is the decisive factor in the treatment of loanwords" (Fischer-Jørgensen 1979 : 246). Thus, e.g., in order to avoid the neutralization in Bulgarian (due to the afore-mentioned frequent confusion of English /æ/ and /e/) of phonemic contrasts in proper names such as Al(l)ison — El(l)ison, Campbell — Kemble, Stratford — Stretford (and many more — cf. Danchev 1979/1982), a theoretical model including surface structure phonemes is needed in order to ensure the correct identification of such names in the target language. Evidence of this kind underpins the broader view of structuralism as a ge-

neral linguistic orientation consisting of two branches — one taxonomic, the other generative, which are complementary rather than mutually exclusive (cf., e.g., Bugarski 1982 : 57).

By way of a final conclusion it is hoped that if this paper has not succeeded in dispelling all the doubts surrounding the phonetic nature of Common Slavic jat' in Old Bulgarian, it has at least reduced them by lending additional support to one of the existing hypotheses — namely that there were both /æ/ and /ja/ (not /ea/ as a falling diphthong) variants, with /æ/ as the older one.

On a more general methodological plane it can be claimed that the evidence adduced in this paper highlights once more the fruitful interaction of theoretical and applied linguistics, in this particular case bringing together such different disciplines as historical dialectology, internal historical development, language contacts and foreign language acquisition. The application of such comparisons to other languages can be expected to provide some interesting new insights into this and a number of other complex issues, such as, e.g., OE palatalization, the recurrence of phonological change (Dressler 1982), the elaboration of an overall language contact typology (Andersen 1974; Moravcsik 1975), etc.

APPENDIX — ACOUSTIC DATA

Engl. /æ/	Wells 1962	748	1746	2460
	Delattre 1964	750	1700	—
	Denes and Pinson 1974	660—860*	1720—2050	2410—2850
	Henton 1982	713	1615	2491
Bulg. /a/	Stoikov 1966	700	1200	2200
	Tilkov 1968	513	1083	2134
	Lehiste and Popov 1970	770	1455	2260
	Kärlova 1985	743	1210	2719
Bulg. /e/	Stoikov 1966	475	1675	2300
	Tilkov 1968	411	1665	2319
	Lehiste and Popov 1970	500	1810	2380
	Kärlova 1985	491	2193	2898

* The two measurements refer to male and female speech.

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