

## About German diphthongs and their phonological representation

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As table (1) shows, German has three kinds of vowels : long monophthongs (henceforth LM), short monophthongs (SM) and diphthongs (DI). Besides, it has been claimed that long and short vowels are in complementary distribution in German (see Becker 1998; Eisenberg 1991; Giegerich 1992; Hall 1992;2000; Wiese 1996) : SM (i.e. [ɪ ɛ ʏ œ ʊ ɔ a]) vs. LM (i.e. [i: e: y: ø: u: o: a:]) are supposed to occur in closed vs. open syllables (cf. *finden* ['fɪndən] 'to find' – but not \*['fi:ndən] – vs. *dienen* ['di:nən] 'to serve' – not \*['dɪnən]).

The question is then to know what DI really are (i.e. if they are to be classified among SM, LM, or even if they belong to a third category). Since it is not worth considering diphthongs as SM (lots of them occur in open syllable, i.e. should be long), and since people do not wish to create another category, phonologists usually treat DI like 'special' long vowels: they allot them two skeletal slots (as under (2a)), and, doing so, confer them the same status as [i:] or [a:] (cf. under (2b)), without giving any other argument (cf. Wiese 1996 among others).

The main goal of this talk will be to show that the standard assumption mentioned above is incorrect, and that German DI are to be considered neither as SM nor as LM (both possibilities will be dealt with). I will prove that DI constitute another category. The evidence I will provide in order to support my claim comes from the synchronic and diachronic study of an electronic corpus of German composed of simplex words (cf. Caratini 2004;2005). If one has a closer look to the German language, and at its history, several things emerge, about DI.

- a. First of all, synchronically, DI differentiate themselves from LM, since, unlike them, they have no short counterpart: [i: e: y: ø: u: o: a:] (i.e. long [+ATR] vowels) match respectively with [ɪ ɛ ʏ œ ʊ ɔ a] (i.e. same back- / frontness, height, (un)roundedness as in the first set, but short and [-ATR]); however, [aɪ ɔɪ aʊ] are left alone.
- b. They can surface in stressed **as well as** in unstressed positions (cf. *Arbeit* ['(?)arbaɪt] 'work' and *Heu* ['hɔɪ] 'hay'), whereas LM need stress (cf. *Krieg* ['kʁi:k] 'war' vs. *cremig* ['kre:mɪk] 'creamy'; LM are banned from stressless positions).
- c. They do occur in 'real' closed syllables, unlike LM which are exceptional in such contexts (cf. *seufzen* ['ʃɔɪftzən] 'to sigh' vs. *schöpfen* \*['ʃø:pfən] but ['ʃœpfən] 'to scoop').
- d. Diachronically, Middle High German (henceforth MHG) diphthongs (i.e. <ei>, <öu>, <ou>, <ie>, <üe> and <uo>) did not undergo the shortening process that the 'normal' MHG long vowels had to go through. However, this fact cannot depend on the relative ordering of both processes, since they are supposed to have occurred at the same time.
- e. MHG high LM (i.e. <î>, <iu> and <û>), which diphthongized between MHG and Modern German, also kept their initial length, even if they were standing in a shortening context. Both processes also took place at the same time: chronology is not involved here either.
- f. I will also have to provide a unified account of the '[pf]-[ts]-problem' in German, since there is none: [pf] and [ts] are usually considered as affricates (see Hall 1992;2000; Wiese 1996; Wiese 1996) – i.e. only one consonant, only one x-slot – but they often follow SM, and scarcely ever LM. I will claim that they are geminates.

In sum, thus, if one dispenses with the standard representation of German diphthongs, several problems can be solved, concerning the German vocalic system, as seen synchronically and diachronically. Furthermore, it allows us to define German 'affricates' in a more appropriate and unified way (synchronically and diachronically), and to make diachronic predictions which are falsifiable.

## Tables :

### (1) German vowels

Types		Front & Non-Round	Front & Round	Back & Round
a. Long monophthongs	High	<i>B<i>ü</i>ene</i> [i:] ‘bee’	<i>B<i>ü</i>hne</i> [y:] ‘stage’	<i>s<i>ü</i>hlen</i> [u:] ‘to wallow’
	Mid	<i>B<i>e</i>ere</i> [e:] ‘berry’	<i>b<i>ö</i>se</i> [ø:] ‘evil’	<i>B<i>o</i>hne</i> [o:] ‘bean’
	Low	<i>f<i>ä</i>hren</i> [ɑ:] ‘to drive’		
b. Short monophthongs	High	<i>f<i>ü</i>nden</i> [ɪ] ‘to find’	<i>B<i>ü</i>ndel</i> [ʏ] ‘bundle’	<i>M<i>ü</i>lde</i> [ʊ] ‘hollow’
	Mid	<i>d<i>e</i>nken</i> [ɛ] ‘to think’	<i>sch<i>ö</i>pfen</i> [œ] ‘to scoop’	<i>D<i>ö</i>lde</i> [ɔ] ‘umbel’
	Low	<i>Ängel</i> [a] ‘fishing tackle’		
c. Diphthongs		<i>w<i>e</i>inen</i> [aɪ] ‘to cry’	<i>F<i>r</i>eude</i> [ɔɪ] ‘joy’	<i>G<i>l</i>aube</i> [aʊ] ‘faith’

### (2) Diphthongs & long monophthongs

a. Diphthong vs. b. Long monophthong

x x  
| |  
a i

x x  
∨  
i:

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