## THREE PROBLEMATIC DUTCH DIPHTHONGS

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"There is something puzzling about the Dutch diphthongs ei (ij), ou (au) and ui..." (Mrs. L. Kaiser, Lingua, I, p. 303). There is, likewise, something puzzling about the other Dutch diphthongs, or so-called diphthongs. In books and articles on the topic we find mentioned as diphthongs or discussed as diphthongs the sounds or this is with regard to lei, lui and kou one of the problems - the sound following after the k or the 1 of the words: 1. lei, 2. lui, 3. kou, 4. laai, 5. looi, 6. loei, 7. leeuw, 8. kieuw, 9. luw; moreover, 10. the $a i$ of the interjection $a i$ and 11. the $a u$ of the interjection $a u$, or the sound(s) following after the $i$ of the onomatopoeia miauw. This is, of course, neither a phonetic nor a phonological transcription; it is the normal orthographical notation. Some of these sounds have more than one orthography: lei and lij, jou and jouw, kou and kauw, gouw and gauw are homonyms; the auw in kauw and the auw in miauw are not identical. Some scholars do not mention laai and loei, or $a i$ and $a u$. In recent publications luw always is absent. There are three classifications, viz. I. four categories: a. laai, loei, b. ai, lei, lui, c. kieuw, leeuw, d. kou; II. two categories: a. lei, lui, laai, looi, loei, ai, b. kou, au, leeuw, kieuw, luw; III. two categories: a. lei, lui, kou, b. laai, looi, loei, leeuw, kieuw.

The diversity of opinion, however, is greater than that. For simplification's sake the following survey takes no account of luw, ai and $a u$; ei represents 1-3 (lei, lui, kou), aai represents 5-8 (laai, looi, loei, leeuw, kieuw).
A. Ei is more monophthongical than aai, or less diphthongical than aai; it is a half monophthong or a half diphthong.
B. There is an absolute contrast between a monophthong and a diphthong.

Group 1-3.
I. $E i$ is one phoneme and a monophthong; it is of the same order as aa (maan) and ee (meen).
I. $E i$ is one phoneme and a diphthong, characterized by heterogeneity.
III. $E i$ is one phoneme and a diphthong, consisting of two identifiable elements.
IV. $E i$ is one phoneme and a diphthong, consisting of three elements.
V. $E i$ is a diphthong, consisting of two phonemes: the vowel of let and the vowel of lied.

Group 4-8.
I. Aai consists of two phonemes, both vowels; it is a diphthong.
II. Aai consists of two phonemes, a vowel and a consonant; it is a diphthong.
III. Aai consists of two phonemes, a vowel and a consonant; it is not a diphthong.
IV. Aai consists of three elements.

Group 1-3 is more problematic than group 4-8. Aai has never been called a monophthong and there are not two opinions about the quality of the first component; it is the phoneme $a a$, the vowel of words like maan, maat, etc. The same holds good with regard to ooi (the first element is the vowel of lood), leeuw (the first element is the vowel of leed), etc. The members of group 1-3, however, have caused a Babel of tongues, a complex of different opinions: monophthong and diphthong, one phoneme and two phonemes. Moreover, those who call $e i, u i$ or $o u$ one phoneme and a diphthong consisting of two elements, do not describe the two elements in the same way. Some identify the first element (as a "sound", not as a phoneme) with the vowel of met and some state a difference. The first element of the $u i$ is the $u$ of the Dutch word put, or the first vowel of the word freule, or something like that but not exactly the same. Finally there is the terminologically unacceptable distinction between proper (ei) and improper diphthongs (the ee of the word zee).

The background of the divergences of opinion is for the most part a philosophical, an epistemological problem. The object of investigation changes with the attitude of the investigator. Remaining nearest to his phonological starting-point and to the perception of the native speaker, the investigator comes to the conviction that the $e i$ is a monophthong. But the inspection of the oscillograms gives him the impression that an optimal realization of the ei consists of three elements. In her Biological and statistical research concerning the speech of 216 Dutch students Mrs. Kaiser says: "It happened especially in closed syllables that only two parts were recognizable, each of the three parts, but most frequently the last part, being absent now and then." This proves that the phonetic reality is far more complicated than the traditional phonetic transcription - [zi] - suggests.

When listening to a series of fragments of an optimal realization of a word with an $e i$ between two consonants, one hears three parts. (Fragment $\mathrm{n}=\mathrm{a}+\mathrm{b}+\mathrm{c}+\mathrm{d}$, fragement $\mathrm{n}+1=\mathrm{b}+\mathrm{c}+\mathrm{d}+\mathrm{e} ; \mathrm{a}, \mathrm{b}, \mathrm{c}$, etc. are sound-particles of a hundredth of a second.) The first fragments contain something like an $\varepsilon$; the last fragments contain something like an i. Between these fragments one hears several times an ei as an unanalysable entity.
A phonological description of the $e i$ (the $u i$, the $o u$ ) as a combination of two phonemes or as one phoneme consisting of two elements comes into conflict with the perception of the native speaker and moreover with some results of phonetic research. The monophonematic interpretation, on the contrary, has more troubles with regard to the notion of the distinctive features.

