

[0486]

# THE PHONOLOGICAL INTERPRETATION OF NASALITY IN FRISIAN RECONSIDERED

O. In the late fifties there were published a number of short articles by Hoekema (1954; 1957; 1958; 1959;) and Van Coetsem (1956-7; 1958) on the question whether in Modern West Frisian pairs like **iens** [iẽs] ‘once’ – **ies** [iəs] ‘bait’, **kiste** [kistə] ‘chest’ – **kinste** [kĩstə] ‘can you’, **wist** [wɪst] ‘knew’ – **winst** [wẽ:st]<sup>1</sup> ‘profit’ should lead the linguist to the conclusion that in Frisian there was a series of nasal, and a series of non-nasal vowel phonemes. Van Coetsem held that there were no nasal *phonemes* in Frisian, only nasal *sounds* like e.g. [iẽ], which was to be considered the realisation of /iə/ + /n/ before certain consonants, e.g. /s/, thereby criticising Hoekema’s view that the opposition **ies** – **iens** did justify us in concluding that Frisian possessed a number of nasal vowel phonemes.

This discussion came to an end when Hoekema (1959) ultimately admitted that he had been wrong all the time. This surrender was due to the publication of Fokkema et al. (1959)<sup>2</sup>, which Hoekema said had settled the above dispute in favour of Van Coetsem. I will now quote the relevant passage in Fokkema et al., and then proceed to a critical examination of the views put forward there: ‘In het Fries worden in bepaalde omstandigheden verschillende vocalen genasaleerd, d.w.z. dat de lucht gedeeltelijk ook door de neus gaat. Bijv. **ik wenje** [ɪk vɛñə]<sup>3</sup>, ‘ik woon’ naast **hy wennet** (hɛɪ vɛnɛt] ‘hij woont’, **dou kinste** [do: kĩstə]<sup>4</sup> ‘jij kunt’ naast **ik kin** ‘ik kan’. Tegenover [kĩstə]<sup>4</sup> zou men het substantief **kiste** ‘kist’ kunnen plaatsen en dan kunnen concluderen, dat er een oppositie nasale klinker – niet-nasale klinker zou bestaan. Daar deze nasalering voorkomt waar oudtijds, of in andere vormen nu nog, een n voor **s, f, v, w, l** of **r** staat en dus volkomen voorspelbaar is, en afhankelijk van de omgeving, kan de nasaliteit het best beschouwd worden als een combinatorische variant van de n, die in bovengenoemde omgeving ontstaat. Men vergelijk nog [‘ðənhɛljə] ‘aanhalen’ met niet-genasaleerde klinker naast [‘ð.jɛijə]<sup>5</sup> ‘aanjagen’ met genasaleerde klinker uit n voor j, maar met hetzelfde morfeem /ðən/’ (Fokkema et al. 1958:112-3)<sup>6</sup>.

1. That there is an opposition between e.g. **kiste** – **kinste** is not in doubt. From the discussion of the word *opposition* in Fokkema et al. (1959:3-4) it appears that opposition is a relation holding between *sounds*<sup>7</sup>. This is in accordance with the Prague School use of the term; compare Trubetzkoy (1971:31): ‘Oppositions of sound capable of differentiating the lexical meaning of two words in a particular language are *phonological* or *phonologically distinctive* or *distinctive* oppositions’. However, does this allow us to jump to the conclusion

that then we here have the phoneme /ɪ/ and the phoneme /u/ ? For a sound to be the realisation of a phoneme the following condition should hold: a phoneme is a *phonological unit* (i.e. a member of an opposition (Trubetzkoy 1971:33)) which from the point of view of the given language cannot be analysed into still smaller successive distinctive units (Trubetzkoy 1971:35; Šaumjan 1968:32); i.e. a sound is to be monophonematically interpreted if smaller consecutive segments of it do not take part in phonological oppositions. Trubetzkoy also clearly implies that a phonological unit should be able to occur in isolation (1971:34); if this is not possible then it cannot be a phonological unit.

As [ɪ] cannot be analysed into still smaller *consecutive* distinctive units, and as moreover its nasality cannot occur in isolation, the conclusion must be that [ɪ] is not capable of diphonematic interpretation.

2. In Fokkema et al. the phoneme is defined as 'een bundel van distinctieve eigenschappen van een spraakklank' (1959: 7). This is very similar to Trubetzkoy's definition: 'the phoneme is *the sum of the phonologically relevant properties of a sound (Lautgebilde)*' (1971:36)<sup>8</sup>. Now the phonologically relevant properties of /n/ are apicality and nasality (Fokkema et al. 1959:126), and these must be present in any realisation of /n/, cf. Trubetzkoy (1971: 66) where it appears that the sum of the relevant properties is called its *phonemic content*: 'By phonemic content we understand all phonologically distinctive properties of a phoneme, that is, those properties which are common to *all variants* of a phoneme and which distinguish it from all other phonemes of the same language, especially from those that are most closely related' (italics added).

In [kɪstə] we do find nasality but not apicality, therefore [ɪ] here does not allow of a diphonematic interpretation.

3. 'Daar deze nasalering voorkomt waar *oudtijds*, of *in andere vormen* nu nog, een n voor **s, f, v, j, w, l** of **r** staat en dus volkomen *voorspelbaar* is, en afhankelijk van de omgeving, kan de nasaliteit het best beschouwd worden als een combinatorische variant van de n, die in bovengenoemde omgeving *ontstaat*' (Fokkema et al., cf. 0)(italics added).

In '*oudtijds*, of *in andere vormen*' the 'of' is here no doubt *inclusive* 'of'<sup>9</sup>, and must be read to mean 'en/of'. If it were to mean 'either - or', Fokkema could be accused of introducing historical considerations into a synchronic description. What he refers to is of course the fact that **kinste** must once ('*oudtijds*') have been pronounced [kɪnstə], and that in paradigmatically, or derivationally, related forms ('*andere vormen*') we can still find the stem **kin** [kɪn], e.g. [ʊk kɪn], [hɛi kɪn], etc. This argument is due to the very familiar tendency among linguists to avoid having two different forms of one and the same morpheme,

or more correct perhaps, the tendency to assign to *sames of meaning* *sames of form* (cf. Bloomfield 1933: Ch. 33; Davis 1973:116 ff.). In Bloomfield (1933:218) we find a very clear statement: 'We have seen that when forms are partially similar, there may be a question as to which one we had better take as the underlying form, and that the structure of the language may decide this question for us, since, taking it one way, we get an unduly complicated description, and, taking it the other way, a relatively simple one. This same consideration often leads us to *set up* an artificial underlying form'. Considerations of *descriptive simplicity* of this kind would doubtless lead us to set up /kɪn/ as an underlying form in [kɪn] and [kɪstə], because [kɪstə] is easily derived by means of rules from /kɪnstə/ (remember '*voorspelbaar*'). It is not possible to do the opposite: /kɪ/ as an underlying form does not lead to [kɪn] by any known rules in Frisian. It should be emphasised that underlying forms are just set up for descriptive convenience, not because they are given a *realistic*<sup>10</sup> interpretation (Bloomfield 1933:213). Moreover, 'The elements making up basic forms are not sharply distinguished from those making up the variants. /.../ In later work the shapes of basic forms are distinguished and termed morphophonemes, and those of the variants, phonemes' (Davis 1973: 118-9). This threefold division (morphophonemes, phonemes, phones) was adopted in post-Bloomfieldian theory in order to avoid the insuperable contradictions arising from the assumption that a morpheme was *composed-of*<sup>11</sup> (or *made-up-of*) phonemes. Take for example English **knife** and **knives**. If we assume that a morpheme is composed-of phonemes, and also believe that **knife** and **knife-** are one morpheme, any two of the following three statements exclude the third: I **knife** and **knife-** are the same morpheme; II **knife** and **knife-** are phonemically different (which they are: /f/ and /v/ are two different phonemes in English); III a morpheme is composed-of (made-up-of) phonemes (Hockett 1961:30). To escape from this 'trilemma' two ways are open (Hockett 1961:32): the *morphophoneme* method, and the *morph* method.

In the former, morphemes are composed-of morphophonemes, and morphophonemes *represented-by*<sup>11</sup> phonemes. As elements related by composed-of are by definition elements of the same stratum of a language, but of a different *size-level*<sup>12</sup>, we can say that morphemes and morphophonemes belong to the same stratum, and morphophonemes and phonemes to different strata (Hockett 1961:41) in this view. In the latter, morphemes are represented-by morphs, and morphs are composed-of phonemes. So here morphs and phonemes belong to the same stratum, morphs and morphemes to different strata. Like Bloomfield Hockett denies any realistic interpretation to concepts like morphophonemes, morphs etc.; they are just 'artifacts of analysis' or 'conveniences for description' (Hockett 1961:42).

It seems to me, recapitulating so far, that in the

former method morphophonemes and morphemes are elements of grammar, not form, whereas the phoneme is an element of form; and in the latter method morphemes are elements of grammar, and morphs and phonemes are elements of form.

But it is high time to return to Fokkema's analysis of **kinste**. We saw above that the nasality here can never be the realisation of a phoneme, at least not in the framework adopted by Fokkema et al.<sup>8</sup>. Why does he analyse **kinste** as /k+i+n+s+t+ə/ then? The answer was hinted at above: because of the same-meaning-same-form syndrome. Still, Fokkema does not call /kɪnstə/ a morphophonemic representation, which in my opinion in fact it is. As /kɪnstə/ is called a *phonemic* representation, we are back to our 'trilemma': I [kɪn] and [kĩ] are the same morpheme; II [kɪn] and [kĩ] are phonemically different (which they are, as they cannot be phonemically identical, cf. 1 and 2); III a morpheme is composed-of phonemes (the way words like *morfeem* (113), *morfeemgrens* (100) and *morfeemnaad* (135) are used in Fokkema et al. clearly indicates that this is the correct interpretation of the *undefined* word *morfeem* as used by Fokkema).

There is no escape from this 'trilemma'. Conclusion: (a) a morpheme is, and is not, composed-of phonemes; (b) [kɪn] and [kĩ] are, and are not, the same morpheme; (c) [kɪn] and [kĩ] are, and are not, phonemically different.

#### 4. Trubetzkoy's polyphonematic evaluation of single sounds (Trubetzkoy 1971:60 ff.)

Trubetzkoy himself also occasionally analyses single sounds as the realisations of two phonemes. Take e.g. his rule VII: 'If a single sound and a combination of sounds /.../ stand in a relation of optional or combinatory variance, in which the sound combination must be considered the realization of a phoneme sequence, the single sound must also be considered the realization of the same phoneme sequence' (Trubetzkoy 1971:60).

Can this rule be applied to the problem under consideration? As Fokkema, and Van Coetsem (1958:14-5), unequivocally state, [ɪ] (the 'single sound') and [ɪn] ('a combination of sounds') are in a relation of combinatory variance, i.e. they do not occur in identical environments, and are phonetically similar (on phonetic similarity, cf. Trubetzkoy 1971:49). So apparently Trubetzkoy's rule could be applied to this particular case. But it need not be stressed that such a procedure is at variance with the *theory*, as demonstrated above, in 1, 2 and 3.

We catch a glimpse of the reasons behind such practice if we quote his rule V for the determination of phonemes (Trubetzkoy 1971:59): 'A combination of sounds /.../ must be considered the realization of a single phoneme, if this produces symmetry in the phonemic inventory'. Nothing could be more unequivocal: here (aesthetic?) reasons of

*symmetry* clinch the matter. I argued above that a similar line of thought was responsible for Fokkema and Van Coetsem's decision to consider [ɪ] the realisation of two phonemes: they too were led by extra-phonological considerations, viz. the same-meaning-same-form syndrome and in all probability the wish to keep down the number of phonemes in the phoneme inventory. Still, considerations of simplicity, symmetry etc. are of long standing in the history of science, and have proved extremely fruitful (Davis 1973: Ch. 1). How is it then that there is a non-fit between theory and practice? The reason is to be sought in the theory.





Trubetzkoy's theory (which is largely also Fokkema's theory) is what Šaumjan calls the *relational-physical* theory of the phoneme (Šaumjan 1968:17 ff.). *Physical*, because the phoneme (defined as the sum of relevant properties) is in some way directly related to physical properties like nasality, apicality, voice etc. On the other hand, the phoneme is also a *relational* concept, consider for instance the relation of opposition between two sounds. In Trubetzkoy's own words: 'The phoneme is, above all, a *functional* concept that must be defined with respect to its *function*' (Trubetzkoy 1971:39) (italics added). From such a statement it is only a small step to the following inference: if two rather different acoustic and articulatory elements can be said to function similarly, they are *identical*, i.e. realisations of one and the same phoneme (Šaumjan 1968:41). Take the notorious case of [h] and [ŋ]. In e.g. German, Dutch and Frisian they are never members of an opposition, i.e. their functions are not different. So why not consider them the realisations of one phoneme? The intuitive unacceptability of such a solution is clear, that is why it is often obviated by the restriction that for two sounds to be the realisations of one phoneme they must have 'phonic properties that would distinguish them from all other sounds of the same system' (Trubetzkoy 1971:33); and '/.../' the opposition of the German *h* and *ŋ* ("ng") sounds, which are also noninterchangeable, is nevertheless distinctive '/.../'. The reason for this is that the only property these two sounds have in common, that is, their consonantal property, is by no means unique to them alone and does not distinguish them from the other consonants of German' (idem: 33). In other words, two such sounds must be phonetically similar. Now it is clear that such a restriction is in accordance with the physical aspects of the definition of the phoneme, but not necessarily with its relational (functional) aspects. Compare Davis's illuminating remarks on this question: *in reality* in Prague School theory 'The definition of phonological elements is *independent of distinctive function* '/.../'. Identity is *assumed*, not defined, and is justified in individual languages by the *degree of generality* the identification adds to the accounting, and rejected when such identification detracts from the generality' (Davis

1973:255-6) (*italics mine*)<sup>13</sup>. Let me draw some conclusions. In my view the theory behind Fokkema et al. (1959) is ambiguously and simultaneously *instrumentalistic*<sup>10</sup> (or perhaps *descriptivistic*<sup>10</sup>) and *realistic*<sup>10</sup>. This inevitably leads to insurmountable theoretical difficulties, as also pointed out by Šaumjan, though he adduced different arguments.

Secondly, if we accept Davis's conclusion that Prague School practice at least points to the fact that their theory was in reality an *explanatory*<sup>14</sup> theory (Davis 1973: 255-6), then we could modify the theory in some such way as Šaumjan (1968:48-50) indicates. The following elements could then be distinguished: *phonemes*, 'elements which have no inherent physical substance', i.e. 'hypothetical units which relate to the level of constructs' (48); *sounds*, 'physical elements' (50); and *phonemic substrata* 'relational physical elements' which are 'in relation of embodiment to phonemes' (50) (i.e. they realise phonemes). Šaumjan calls his theory the *two-level theory of phonology*, for he distinguishes two levels, the level of *constructs* (to which the phoneme belongs) and the level of *observation* (to which sounds and phonemic substrata belong). 'Constructs relate to the level of observation through the so-called rules of correspondende' (Šaumjan 1968:7). In such a theory the difficulties pointed out above could, as it would seem, be avoided. But then we would surely have left the framework of Fokkema, Van Coetsem and Hoekema.

At any rate, Fokkema's theory and Fokkema's practice clash, this much is clear. The reason is that his phoneme is simultaneously a *physical* and a *functional* (relational) concept.

5. 'ontstaat' (Fokkema et al. 113) (cf. 0). It is not quite clear to me what the use of 'ontstaat' here implies. If Fokkema really means what he says here, he could perhaps have something in mind like the procedure applied by the transformational-generative linguists. In Part II of Schane (1973), very aptly called *dynamic phonology*, the following passage occurs. After analysing **electricity** as

|       |   |                |   |
|-------|---|----------------|---|
|       |  | elektrik + iti |  |
| k → s |  | elektris + iti |  |

vowel adjustments                      əlektrisit̩y.

Schane asks: 'Why do we want all this machinery - underlying (abstract) representations, phonological rules, and derived (phonetic) representations?

1. The forms **pæs** (pass) and **pæk** (pack) constitute two separate morphemes which differ phonologically in the final consonant. The forms **əlektrik** and **əlektris** differ in the same way in their final consonants, yet they are variants of a single morpheme. We should like to show that at some level **əlektrik** and **əlektris** are somehow the same in a way in which **pæs** and **pæk** are not. If we have an

underlying representation in which both alternants are represented identically, then we have given a unique representation to a unique morpheme.

2. The alternation **əlektrik**, **əlektris** is not limited to this one morpheme. Other morphemes exhibit the same consonant alternation: **fənætik** and **fənætis** in the words **fanatical** and **fanaticism**. The alternation between **k** and **s** is not random, but can be stated as a rule of English. Because the alternation is rule governed, an adequate description of English must indicate explicitly that this change occurs. It is the rules converting underlying representations to derived ones which explicitly characterize the processes of a language.

3. That the morpheme **electric** does in fact have two pronunciations, according to the surrounding environments, is a fact of life. At some point, we need to state all the ways in which a morpheme is phonetically realized. It is the derived representations which directly tell us the different phonetic manifestations of a morpheme' (Schane 1973:74-5).

This approach is amazingly similar to Fokkema's description of **kinste**. As here we also find a 'rule governed' alternation between morphemes, Fokkema chose a solution which on one level did away with the difference (transcribing the word **kin** as /kɪn/ and **kinste** as /kɪnstə/), and on another level stressed the difference (phonetically **kin** is then [kɪn] and **kinste** [kɪnstə]). The transition between these two levels is never made explicit, we are just told of phonemes and variants. Perhaps the word 'ontstaat' points to what he perhaps had in mind: the phonetic representation is *derived* from the underlying representation by means of rules, thus [kɪnstə] is derived from /kɪnstə/. Now we saw that Fokkema considers /kɪnstə/ to be a series of *phonemes*. In a famous passage Chomsky demonstrated that the familiar concept of phoneme has to be dropped altogether, at least if we stick to transcriptions like /kɪnstə/. I will not attempt to summarise Chomsky's entire discussion here. Let it be sufficient to show that /kɪnstə/ - [kɪnstə] violates two of the four conditions of structural phonology Chomsky enumerates. In the first place the *linearity condition* is violated (Chomsky 1964:78). In structural phonology the linearity condition requires that each phoneme be associated with a phone, and that if phoneme A precedes phoneme B in the phonological transcription, then the phone associated with A should precede the phone associated with B in the phonetic transcription. Clearly, this condition is violated in the case of /kɪnstə/ - [kɪnstə]. Secondly, the *invariance condition* is violated (Chomsky 1964:79). This condition requires that each phoneme P have associated with it a set of *defining features*, and that wherever P occurs in a phonological transcription, there must be an associated occurrence of the set of

defining features in the phonetic transcription. But as we saw above in 2 the relevant property (= defining feature) apicality is absent in [k̥stə], so that a transcription /k̥nstə/ also violates this condition. As Chomsky's analysis seems to be a fair assessment of structural phonology (cf. Derwing 1973:170), the conclusion must be that the word 'ontstaat' (if taken at face value) uncovers another flaw in Fokkema's approach, for here once again practice and theory are at odds. The ultimate reason for this is that Fokkema did not strictly separate *morphophonology* and *phonology*.

### 6. Breaking

In Frisian we have so-called *breaking*. A couple of examples will suffice to indicate the meaning of this term. What happens is that a semantic unit corresponds to two different phonetic variants (cf. Fokkema et al.2: 119):

|                 |   |                     |                  |
|-----------------|---|---------------------|------------------|
| doas /dòəs/     | - | doaske /dwaskə/     | (box- small box) |
| beam /bɪəm/     | - | beammen /bjəmən/    | (tree - trees)   |
| stien /stiən/   | - | stiennen /stjinən/  | (stone - stones) |
| sluere /slüərə/ | - | sljurkje /sljʌrkjə/ | (to slide)       |
| foet /fuət/     | - | fuotten /fwòtən/    | (foot - feet)    |

Though the exact conditions for breaking have never been fully stated, it is safe to say that to a very large extent this alternation is *rule governed*, so that an adequate description of Frisian should explicitly indicate that this change takes place. The alternation [k̥n] - [k̥] is also rule governed, and [k̥] is derived from /k̥n/ (cf. 'ontstaat') by Fokkema. What would be more natural than to expect the same procedure (i.e. deriving two phonetic forms from one phonological form) to be applied by Fokkema in the case of breaking? Surprisingly enough, Fokkema here prefers not to: 'Men zou zich kunnen afvragen of deze 'gebroken' klanken geen varianten (allofonen) van de ongebrokenen zijn. Daar er somtijds verschil is tussen de ongebroken klanken en de gebroken in dezelfde positie menen we de gebroken klank niet als een variant van de gebroekene (sic! meant is of course 'ongebroekene') te kunnen beschouwen: **ier** /iər/ 'ader', en **hji** /jɪr/ 'hier', **tsiene** /tsiənə/ 'stuk land van 10 pondemaat' en **tsjinne** /tsjinə/ 'gediend', **spier** /spiər/ 'spier' en **spjir** /spjɪr/ 'spar'; /.../. Bovendien komen er gebroken klanken voor zonder dat er, een ongebroken naast staat<sup>15</sup> **stoarm** /stwarm/ 'storm', **rjemme** /rjəmə/ 'room', **fjirtich** /fjɪtɪx/ 'veertig', **guon** /gwòn/ 'sommigen' (Fokkema et al.<sup>2</sup>: 119-120). As we saw above that in practice though not in theory Fokkema did assume the level of morphophonology, this seems to be another inconsistency.

7. In the preceding pages I have given Fokkema and Van Coetsem's theory enough rope to hang itself with, I hope.



However, the fact that I reject their description must not lead the reader to the false assumption that I fully endorse Hoekema's views. I will not enter into Hoekema's arguments here, but only point out that Hoekema in my opinion was much too rash in admitting defeat after reading Fokkema et al. (Hoekema 1959:88), for his objections were not at all unfounded.

What I would like to point out as well and above all is that it is no use starting the old debate all over again: since Hoekema (1959) new developments in phonological theory have taken place, which it is imperative to take into consideration before trying to solve the problem formulated in 0. For these new developments I may refer the reader to e.g. Halle (1962), Chomsky (1964), Chomsky/Halle (1968), Šaumjan (1968), Schane (1973), and for criticism of the new tendencies, Derwing (1973). From these works it emerges that we must either drop the concept of the phoneme altogether (the generative-transformationalists) or radically redefine it (Šaumjan, 1968)<sup>16</sup>.

Though much of what especially the generative-transformationalists have to offer in terms of new descriptions is in my opinion dubious, their objections to the concept of the phoneme as developed and used by the European and American structuralists (the post-Bloomfieldians) are to a large extent well-founded. For the time being I will not attempt to approach our problem from these new angles. For the sake of future discussions I will just give some more pairs where (a) *nasality* is the only feature that distinguishes two otherwise identical phones, and (b) some examples where two nasal vowel sounds differ in *length* only.

(a) (dou) **winst** [vĩst] - (dou) **witst** [vɪst]; (dou) **wynst** [vũ:st]<sup>17</sup> - (dou) **wiist** [vɪ:st]; (dou) **baernst** [bã:st] - (for) **baesd** [ba:st]; (dou) (bi) **minst** [mĩst] - **mist** [mɪst]; **hwaens** [vã:s] - **waes** [va:s]; (dou) **raenst** [rã:st] - (dou) **raest** [ra:st]; (dou) **bjinst** [bũst] - **bjist** [bɪst]; **minske** [mẽ:skə] - **meeske** [me:skə]; **stins** [stẽ:s] - **stees** [ste:s]; **lins** [lẽ:s] - (ik) **liz** [le:s]<sup>18</sup>; (it) **brûzen** [bru:zən] - **brûnzen** [brũ:zən]; (dou) **lienst** [liẽst] - (dou) **lietst** [liəst]; (dou) **gunst** [gãst] - **gust** [gʌst]; **lâns** [lõəs]<sup>19</sup> - **loas** [lòəs]<sup>20</sup>; **oanlein** [ðə̃lain] - **ôflein** [‘ðə̃lain]; and a large number of other examples with oan- and ôf-, e.g. **oanriede** - **ôfriede**; **oanjaen** - **ôfjaen**; **oanslaen** - **ôfslaen**; etc.; **hynst** [hĩst]<sup>21</sup> - (hy) **hyst** [hist]; **Hâns** [hõəs]<sup>22</sup> - **hoas** [hòəs]; **ronfel** [rõfəl] - **roffel** [ròfəl]; **krâns** [krõəs]<sup>22</sup> - **kroas** [kròəs]; **mâns** [mõəs]<sup>22</sup> - **moas** [mòəs], (dou) **spanst** [spõst] - (dou) **spotst** [spɔst].

(b) (dou) **winst** [vĩst] - (de) **winst** [vẽ:st]; (dou bi) **minst** [mĩst] - **minst** [mẽ:st]; (dou) **fynst** [fɪst] - (in) **fynst** [fi:st]; (dou) **wenst** [vẽst] - (oan) **wenst** [vẽ:st]; (dou) **gunst** [gãst] - (in) **gunst** [gõ:st]; (hwat) **tins** [fis] - (in) **tins** [tẽ:s]; (dou) **founst** [fũst] - (in) **founst**<sup>23</sup> [fũ:st].

## NOTES:

1. Here of course the problem of length is also involved.
2. A second edition with some minor revisions was published in 1961. I will mostly quote from the first edition. It should be pointed out that the sections dealing with Frisian were written by Fokkema alone.
3. I would transcribe [ɪk vɛ̃jə].
4. Should be [do: kɪstə] with [ɪ].
5. Should be ['ðəjajə].
6. In the rest of this article I will use Fokkema et al.'s phonetic and phonological symbols as well.
7. Though curiously enough on p. 29 of Fokkema et al.<sup>2</sup> we find the statement that 'een oppositie een relatie is tussen twee *fonemen*' (italics mine).
8. It would be incorrect to say that the authors of Fokkema et al. drew on the Prague School only for their theoretical backing; generally, the book seems to be based on the theories of the European and American structuralists (post-Bloomfieldians). I am convinced, however, that for practical purposes we may presume that their theory is something like the theory of the Prague School, *teste* their definition of the phoneme, and the fact that e.g. they too introduce the typical Prague School concept of *neutralisation*.
9. Cf. for the meaning of *inclusive* Strawson (1963:92-3).
10. For the terms *realism*, *instrumentalism* and *descriptivism* used in the following pages, cf. Davis (1973:11-2): 'There is a third class of attitudes one may adopt toward theories. These attitudes involve claims about the relation of theoretical terms /.../ to the data /.../. One may claim that the theoretical terms are not 'real'. It may be claimed that the planets do not *in fact* circle the sun in elliptical orbits. An assumption to the contrary simply ensures a more accurate accounting of the data, the positions of the planets at given times. Such theoretical assumptions make no claims about the *actual* form of the movement of planets. The assumptions provide a tool that is used in accounting for observations. Given this attitude it is meaningless to claim that a theory is validated or invalidated; one merely notes that one theory is more or less *useful* than another in formulating accountings. Such an attitude is called *instrumentalism*. The opposite attitude would claim that the theoretical terms are in fact 'real' in some sense. One interpretation of 'real' might be the following. Given some interpretation of a theory in which the theoretical term X occurs, there is an observation, experimentally accessible to all observers, that can be made and that corresponds to X under this interpretation. The theoretical term X is then 'real' in that it is perceptible to all observers under the appropriate circumstances. A second sense of 'real' is this. A theoretical term X, representing gravity

defined in terms of masses and distance, is real if it occurs in many confirmed accountings of data (positions of planets, movements of falling bodies, arcs of pendulums, etc.). In this sense of 'real' the term X need not be physically perceptible to be counted 'real'. This attitude toward theoretical entities is called *realism*. A third attitude is somewhere between instrumentalism and realism, a kind of 'temporary' instrumentalism. This attitude holds that theoretical entities should be real in one of the senses indicated above (or perhaps some other), but that before that stage can be reached there may be a stage in which theoretical entities are not real as indicated. The theoretical entities are justified instrumentally but not really. This attitude implies that the instrumentally justified terms should be translated or reduced into really justified terms. This last attitude has been named *descriptivism*.'

11. For the use of the terms *made-up-of* and *represented-by*, which I do not think need any explanation, the reader is referred to Davis (1973), *passim*.

12. Cf. Davis (1973), *passim*.

13. We say that the identity relation holds between two sounds when they are variants of the same phoneme; cf. Davis (1973), *passim*.

14. For *operational* and *explanatory* cf. Davis (1973:8-9). We speak of an operational theory when we restrict 'admissible definitions /.../' to those that correspond to patterns derived from handling techniques or operations and observations that may be performed on a range of data. In this way the range of possible definitions is restricted by the art of experimentation' (8). Hempel (1966: 88-9): '/ .../ the meaning (interpretation) of every term must be specifiable by indicating a definite testing operation that provides a criterion for its application. Such criteria are often referred to as 'operational definitions'.' 'An explanatory theory lacks the operational restriction/.../ There is no mechanical procedure that leads to an accounting (unique or not) of the data./.../ One's choice of a particular configuration of statements is guided by past experience, intuition, luck or chance' (Davis 1973:9).

15. There are also words with *nasal* vowel phones that have no related forms with vowel + /n/: cf. e.g. **mínske** [mẽ:skə], **dounsje** [dũ:sjə] etc. Cf. the quotation from Fokkema et al. in section 1.

16. Though even among the generative-transformationalists the phoneme seems to be reconquering lost ground, cf. Schane (1971).

17. [vĩst] also occurs.

18. In my pronunciation at least. In "standard" Frisian [lɪs].

19. In my pronunciation. In "standard" Frisian [lõ:s].

20. The suffix; in written Frisian mostly the purer form **-leas** is used.

21. Also [hĩ:st].

22. Cf. note (19).

23. Dialectal.

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