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REVIEW ARTICLE

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IN A METHODOLOGICAL TRAP

Review article of *The phonology of Danish*, by Hans Basbøll.
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1. Introduction

The book under review appears as the fifth volume in the series *The phonology of the world's languages* which is concerned with the phonology of a Germanic language (the other four offered phonological descriptions of Dutch, English, Norwegian and German). The author, Hans Basbøll, is unquestionably one of the most influential Danish linguists of the last decades, who has published extensively, among other things, on Danish and general phonology and phonetics. *The phonology of Danish* is doubtless the most comprehensive treatment of the phonology of the language ever published. For this and other reasons the book should be greeted with particular attention by scholars working not only in Danish phonology, but also those interested in the more general problems such as possible areas of the phonology-morphology interface or role and structure of prosody.

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The present review article is organised as follows. Part 1 is a brief sketch of the phonological research in the Scandinavian countries after 1965. Part 2 provides an overview of the contents of Basbøll's book. Part 3, with its subsections, offers a discussion with some of the concepts and substantial ideas developed in the book. My criticism will be mostly concerned with the methodological foundations of Basbøll's theory. A detailed study of all the problems discussed by Basbøll would be impossible for obvious reasons, so I decided to choose only one of the characteristic phonological phenomena of Danish, namely *stød*. Basbøll's analysis of *stød* will be reviewed and confronted with an alternative analysis put forward by Larsen (1994). Part 4 is a summary of the review article.

2. An outline of the phonological research in the Scandinavian countries

Before presenting and discussing *The phonology of Danish* by Hans Basbøll it seems appropriate to put the book into a broader context of phonological research in the Scandinavian countries (Norway, Sweden, Iceland, The Faroe Islands and Denmark). Following Hovdhaugen *et al.* (2000) and for reasons given there the year 1965 is taken as a turning point in the twentieth-century linguistics. I will limit my brief presentation to the most significant and internationally recognised contributions of Scandinavian scholars to the phonology of the Scandinavian languages.

In Norway, the main focus has been laid on the prosodic categories of Norwegian such as stress and tone, although one has to concede that regrettably the research is not very impressive. The main contributions in this area, written in the framework of generative phonology, are Fretheim (1969) and Endresen (1977), the latter being an application of the theory of autosegmental phonology to the problem of the relationship between stress and tonemes. Another topic that has attracted a considerable attention is the status of the so-called retroflex consonants (see Endresen 1974, Fretheim 1974). A representative collection of articles (including many earlier structuralist accounts) can be found in Jahr and Lorentz (1981) and (1983). More recently, a comprehensive description of the phonology of Norwegian has been published (Kristoffersen 2000).

Perhaps the strongest impact of generative phonology among the Scandinavian countries can be found in Sweden. Although there still does not exist any book-length account of Swedish phonology comparable to that mentioned for Norwegian, there are numerous case studies devoted to in-

dividual phenomena of the phonology of Swedish. Here one has to name especially the contributions by Claes-Christian Elert (1966) and (1970) and Stig Eliasson (1978) and (1985). Eva Gårding's (1977) study, devoted entirely to the phonology and phonetics of the Scandinavian tonal accents is a major contribution to the area.

The phonological research in Iceland was dominated for a long time by Hreinn Benediktsson, a scholar who brought Icelandic to the attention of linguists world-wide. Primarily a language historian, Benediktsson had a clear theoretical background with Prague School forming his main source of inspiration. However, the expanding generative phonology has also attracted his interest, a fact which is clearly reflected in some contributions (see Benediktsson 1969, 1970). His work has been very influential among younger Icelandic scholars, such as Kristján Árnason, who published a book on quantity in historical phonology (1980) and Höskuldur Thráinsson (1978), whose article on preaspiration in Icelandic, cast in autosegmental phonological terms, has contributed significantly to the development of this theory (Hovdhaugen *et al.* 2000: 513).

An interest in the phonology of the Faroese language started perhaps in the sixties with phonological analyses of the Faroese vowel system which were put forward by international scholars such as Stephen Anderson (1969), Jørgen Rischel (1968) and Björn Hagström (1967). Since then, a considerable number of articles has been published that address different aspects of the phonological system of Faroese. Noteworthy are the articles by Hjalmar P. Petersen (1993, 1999), who is also a co-author of the reference grammar of Faroese which includes an extensive chapter on the phonetics and phonology of the language (Thráinsson *et al.* 2004).

The linguistic tradition in Denmark has been dominated by the glossematic theory of Louis Hjelmslev, hence generative grammar has been treated with skepticism and never really caught on in Denmark (Hovdhaugen *et al.* 2000: 509). There are however scholars who have gained international respect. To them belong Eli Fischer-Jørgensen, the Grand Old Lady of Phonetics, who has published numerous articles on Danish phonology, especially on prosodic features of Danish (Fischer-Jørgensen 1989, 2001) and Jørgen Rischel, whose early contributions were the first to confront Danish data with the paradigm of generative phonology (Rischel 1969, 1970). Rischel has also collaborated with Hans Basbøll, another internationally distinguished Danish phonologist who has published extensively on Danish phonology, contributing also to the development of generative phonology in general (see Basbøll 1969, 1972, 1975, to name just a few of his articles). Particularly striking in this context is the specific theoretical alienation of Basbøll's phonological model outlined in *The phonology of Danish*.

3. The structure of the book

It is not often that a single language receives such a comprehensive and in-depth analysis as in the present case of Danish. Basbøll's book is almost 600 pages long (including an extensive bibliography of the subject). *The phonology of Danish* is divided into six main parts, each consisting of a number of chapters and subchapters. The introductory chapter presents Danish both in the European and Scandinavian context, its typological features and an outline of its history. Previous accounts of Danish phonology are briefly reviewed, starting with the eighteenth century and including studies by such outstanding and internationally recognised scholars as Otto Jespersen, Louis Hjelmslev and Eli Fischer-Jørgensen. Methodological foundations of Basbøll's theoretical model are also laid out in this chapter, a point to which we shall return later on, followed by a survey of notational conventions applied in the book.

Chapter two is concerned with general properties of phonological segments in Danish. Syllabic and non-syllabic segments are discussed and the main prosodic categories are introduced, such as quantity, stød and stress. According to Basbøll vowel length in Danish is contrastive and lexically coded, as the following apparent minimal pairs show:

hule ['hu:lə] (cave) vs. **hulde** ['hulə] (benign, (pl.)/(def.))
hul ['hu:ʔ] (hollow) vs. **huld** ['hulʔ] (benign, (sg. indef.))

The stød complex and its relation to stress and vowel length are also overviewed. Stød is defined here as a syllabic prosody, a laryngealization, a kind of creaky voice (p. 83). Basbøll formulates general conditions a syllable has to fulfil to receive stød, namely that the syllable has to contain a long vowel or a short vowel plus a sonorant consonant, e.g. *ko* [k^ho:ʔ] (cow), *hal* [hɑʔl] (hall).

Chapters three, four and five discuss the problem of distinctive features (unary, binary and multivalued). For Basbøll the term distinctive feature seems to play the central role in classifying the Danish sounds into natural classes and in distinguishing the contrastive segments. Controversially, Basbøll assumes that distinctive features should be phonetically interpretable for all segments they are used to describe. Otherwise they would be treated as abstract features and consequently barred from the analysis (p. 111). The importance of the role of distinctive features is illustrated with such phonological processes as the weakening of consonants and r-colouring of

Danish vowels, the latter understood as a series of sound changes with the effect that the vowel which is adjacent to /r/ becomes ‘one step closer’ to the low pharyngeal vowel (p. 149):

- a:, a > ɑ:, ɑ (before and after (r/), *arne* [ɑ:nə] (hearth))
- ɛ, œ > a, æ (before and after (r/), e.g. *bræk* [bʁæɡ] (vomition))
- œ: > ɛ: (before (r/), e.g. *grøn* [ɡʁœnʔ] (green))
- e (:), ø(:) > ɛ(:), œ(:) (after (/r/), e.g. *frø* [fʁœ:ʔ] (frog))
- ɔ, ʌ > ɒ:, ɔ (before (r/), e.g. *korset* [kʰɒ:sɔ] (corset))
- u(:) > o(:) (after /r/), e.g. *ruse* [ʁo:sə] (trap))
- ə > ɐ (before and after //r/), e.g. *fatter* [fadɐ] (understands))
- ɛ > a: (marginally)

Definitions of natural classes of sounds are given and special attention is focused on the terms vocoid vs. contoid. A vocoid is a “prototypical peak of a syllable” (p. 115) and the point of departure for Basbøll’s analysis of sound classes. The reason for this is the fact that all languages have vocoids as peaks, while only some languages allow contoids (i.e. syllabic consonants) in this function. We shall return to this issue in the section 3.1.

Part three (covering chapters 6–8) is devoted entirely to the discussion of the role of sonority in establishing the structure of the Danish syllable and its phonotactics. Basbøll takes up the controversial status of sonority in the phonological literature and reviews different approaches to the notion. He takes the syllable as the primary domain of phonotactic regularities and the peak of the syllable (the vocoid) as the crucial feature of the syllable. Basbøll introduces the Sonority Syllable Model (the SSM), where segments are grouped according to their distance from the peak of the syllable (p. 203). The restrictions on the occurrence of particular segments in the position of the onset and the coda are confronted with the SSM both in monomorphemic and polymorphemic native words. Initial and final clusters are analysed according to the criterion of agreement with the general principles and predictions of the SSM, hence both occurring, possible and excluded clusters are taken into account.

Part four (chapters 9–12) presents an extensive analysis of the Danish syllable and syllable-related processes. The point of departure is the syllable as a main unit in a phonological description and a domain explaining such prominent phonological features of Danish as *stød* and schwa-assimilation. The latter is a process in which schwa undergoes obligatory or optional deletion (hence the alternative term schwa-drop) in particular contexts (p. 293):

- schwa-assimilation is obligatory, except in highly distinct speech forms, when schwa occurs before a sonorant
- schwa-assimilation is strongly favoured, and in most speech forms obligatory, when schwa occurs after a vocoid
- schwa-assimilation is favoured when schwa occurs after a consonantal sonorant

A more general rule states that schwa is assimilated completely to the most sonorous adjacent segment, i.e. it becomes segmentally identical to it (hence the term assimilation is preferred instead of deletion) when this is a sonorant, but gets dropped if this is an obstruent (p. 293).

Some light is also shed on syllable weight. The weight of the syllable is expressed by the notion of moraicity, whereas a long vowel is adjoined to two mora nodes, a short vowel and a sonorant consonant immediately following a short full vowel is adjoined to one mora node (p. 300). In connection with stress, three stress degrees can be recognised: primary stress (*tonally manifested prominence*, p. 330), secondary stress (*the degree of stress below primary which is strong enough to have stød*, p. 333) and tertiary stress (= absence of stress). Primary stress implies a full vowel peak, whereas a peak without full vowel implies non-primary stress (p. 331). Interestingly, Danish behaves quite differently from its sister languages like Norwegian or Swedish in that in Danish neither primary nor secondary stress imply a heavy syllable. In other words, in Danish, unlike in Norwegian or Swedish, light syllables can have primary or secondary stress:

et kys [eḁ'kʰøs] (a kiss)

Syllables with secondary stress, like primary stressed syllables, are able to have stød, as can be seen in compounds like *undervandsbåd* ['ʊnɐ vɑns, ɸɔð] (submarine).

What comes into focus in part five is the relationship between phonology (stress, stød) and morphology (inflection, word formation). Main morphological categories of Danish are presented and a model for the phonology-morphology interaction developed, based on the notion of morphological productivity. Basbøll aims here to establish a unified and coherent phonological model that would cover both the native and non-native vocabulary.

In the final chapter Basbøll briefly treats the phonology of utterances, including the problem of phrasal stress and intonation.

The book includes also two appendixes (Appendix one: Phonetic symbols, Appendix two: Contrastive segments, phonemes and morphophonemes), a reference list and indices (General Index, Index of Symbols and Index of Danish Words).

4. Discussion

4.1. Occam's Razor

One of the main methodological principles adopted by Basbøll is the well-known Occam's razor, expressed as "no more entities or structures should be posited than those strictly necessary to account for the data" (p. 22). In other words, every theory should aim to be as simple as possible (where by *simple* one understands economy, parsimony, density, cf. Ploch 2003: 149). The simpler theory is to be preferred. This is by no means a novel idea, as the problem of simplicity in phonological (and linguistic in general) description has long been subject of theoretical debate, starting perhaps with another Danish linguist, Louis Hjelmslev and his school of Glossematics. Ploch (2003) connects the notion of simplicity with two other criteria that a good theory should fulfil, namely non-arbitrariness and elegance, but his article shows at the same time that simplicity as a scientific criterion has very often been misinterpreted and wrongly understood (Ploch discusses standard Government Phonology vs. the CVCV-theory but the problem is also well-known from the numerous discussions of the so-called *simplicity metric* in generative phonology, starting with Halle 1961). The reader is confronted with the same problem in Basbøll's book. For if we look for example at his presentation of the segment inventory in Danish, we will be hard-pressed to detect any particular manifestation of simplicity at work there. First of all, the discussion is based on both binary and multivalued distinctive features (syllabic and non-syllabic), leading the author to lists of contrastive segments and minimal pairs. Furthermore, the contrastive segments are divided according to their "phonologically relevant positions": (i) peaks of monosyllables: full vowels, e.g. *lænke* [lɛŋgə] (lenk), (ii) peaks that cannot be peaks of monosyllables: neutral vowels, e.g. the last vowel of *hoppe* [hɔpə] (to hop), (iii) non-peaks that occur initially in a monosyllable, e.g. the first segment of *håb* [hɔ:b] (hope), (iiii) non-peaks that can occur finally in a monosyllable, e.g. the last segment in *mad* [mad̥] (food) (p. 41f.). The very terminological richness is strikingly out of tune in the context of simplicity. Basbøll is obviously not happy with the definitions of terms such as "vowel" – "vocalic" and "consonant" – "consonantal" that are common in the phonological literature (p. 115), and proposes instead to define these terms as "vocoid" and "contoid". A vocoid is understood as a phonetic vowel (p. 117), although in several places Basbøll stresses that not only vowels, but also sonorant consonants (= sonorant contoids) can be syllabic in Danish. Hence his definition for vocoid has to include

not only vocalic, but also consonantal features: [vocoid] =_{def} [sonorant, -stop, -lateral] (p. 117). This confusion, which is anything but terminological in nature, results from a strict adherence to a specific system of distinctive features – much of it could easily be avoided by simply referring to the skeleton, in keeping with most of the phonological tradition of the past decades. Instead, the reader gets lists and diagrams which are complicated and hard to follow (see figure 4.1. on p. 141 as one of the most striking examples) illustrating different segment types grouped according to the distinctive features analysis (taking over 140 pages altogether!). In consequence, the analysis of the Danish phonotactic constraints is also remarkably complicated. Here one could perhaps add that Basbøll seems to completely ignore the fact that distinctive features, his key notion in establishing the sound system of Danish, although having deep roots in the phonological tradition, have never really been universally adopted, neither in the past nor today.

Apparently forgetful of the Occam's razor principle which he preaches, Basbøll introduces a new mechanism, namely the so-called time dimension into his analysis of initial and final consonant sequences, based on his own Sonority Syllable Model. Although widely used in different theoretical frameworks, the explanatory power of sonority in analysing the syllable structure can be easily called in question (cf. some consonant sequences e.g. in Polish, which dramatically violate the sonority sequencing principle). It can be also doubted whether sonority is in agreement with the principle of Occam's razor, since it employs additional mechanism as e.g. sonority hierarchy and covers a rather limited domain (cf. Harris 1994: 177). Instead of being simple, Basbøll's model, together with Euler's circles which he uses as illustrations, emerges as overloaded with entities and obscure in the extreme.

4.2. Phonetic and psychological interpretability

Another crucial theoretical assumption made by Basbøll is the concept of phonetic and psychological interpretability in phonology (p. 22f.). In Basbøll's opinion, a danger many phonologists cannot avoid is to postulate interpretations instead of giving empirical statements (p. 23). In other words, a good theory should be testable, as explicitly expressed on p. 23: *the phonological description should be phonetically interpretable in order to be testable using phonetic methods*. This implies two further problems: the problem of abstractness in phonology and the relationship between phonology and phonetics. As for the former, it is disappointing to find an issue which dominated much of the research in classical generative phonology and which continues to spawn discussion today, reduced to a few very general and largely uninformative statements. Even less clear is the status of the postulated

psychological interpretability, as expressed by the following sentence: *in order to be testable as to the psychological content, even in the least specific way, it must be psychologically interpretable* (p. 23). On the other hand, the author's deep belief in the interplay (the natural relation, as he calls it, p. 23) between phonology and phonetics is explicitly mentioned in many places in the book. Hence, in an attempt to make them more convincing and plausible, Basbøll's phonological analyses are very often confronted with acoustic measurements and phonetic observations. A theory like the CVCV model (or its "standard version") within Government Phonology, which postulates empty nuclei, is criticised by Basbøll as being "at odds with the principles of concreteness and phonetic realism which are adhered to in the present book" (p. 277). This is not the right place to go into a deeper discussion of the possible interplay between phonology and phonetics. Some words however need to be said generally about the oddity of Basbøll's strong claims concerning the inevitable nature of this interplay.

Phonetic realism has a disputable status within the history of phonological theories. It has been used as a kind of justification for claims and stipulations made by different theoretical models, i.e. it has been tacitly assumed that the more phonetically real a theory is, the more plausible it is. It is in phonetic realism (combined with the concept of naturalness and what is called 'the ease of articulation') that historical linguistics has searched the motivation for sound changes. In the recent phonological debate it is especially the supporters of the Phonetic Hypothesis that stress the role of deriving phonological data from phonetic details (see Ploch 2003: 171ff. for a devastating criticism of this proposal). The question about how much phonetics there is in phonology is very controversial and has not been answered yet (it is dubious whether it will be definitely answered at all). Many individual studies (Anderson 1981, Gussmann 2004, Hellberg 1978, 1980) have argued that phonetics plays a very limited (if any) role in the explanation of phonological data, processes and regularities (especially the idea of the ease of articulation has met with radical criticism). Basbøll's radical claims which disregard much of the relevant literature remain weak and unconvincing.

4.3. On Occam's razor and phonetic realism: the Danish stød

In the following section I will try to confront Basbøll's methodological postulates of simplicity and phonetic interpretability with a concrete example of a phonological problem, namely stød. Stød has played a prominent role in the Danish phonological tradition, attracting attention of such outstanding scholars as Fischer-Jørgensen (1989), Rischel (2001) and Basbøll himself

(1985, 1988, 1998, 2003, see also Grønnum and Basbøll 2001). An interesting account on the *stød* complex within the framework of the CV phonology has been developed by Larsen (1994). The frequency with which scholars return to *stød* shows how many problems there are in dealing with this phenomenon. Historically, the Danish *stød* is related to the Norwegian and Swedish word accents (Norwegian *tonemer*). In short, *stød* is defined by Basbøll as a syllabic prosody, namely laryngealization (p. 83). Larsen (1994: 35) adds that *stød* is realised as constriction of the vocal cords which can be superimposed on the regular pronunciation of vowels and consonants. Rather than go into details about the phenomenon itself, I would like to show that Basbøll's idea of simplicity and phonetic realism (interpretability) enjoys an odd kind of realisation in the context of his analysis of *stød*.

In the book *stød* appears in a number of places. The first chapter that introduces the problem of *stød* is chapter 2.9. (pp. 82–87). Then the reader has to wait till chapter 10 (pp. 265–292), but a more detailed analysis follows first in chapters 13.8. (pp. 379–383), 14 (pp. 385–419), 15 (pp. 420–463) and 16 (pp. 464–513). However, one has to admit that the long and frequently disrupted discussion of *stød* is illustrated with an impressive body of data, hence it is very instructive and theoretically challenging. Basbøll's many different assumptions concerning *stød* can be briefly summarised as follows:

- only stressed syllables can have *stød*
- *stød* is a signal of the second mora of a syllable
- light syllables cannot have *stød* (they are monomoraic)
- *stød*-syllable must have either a long vowel or a short vowel followed by a sonorant consonant, because only sonorants can be moraic in Danish

First of all, it is the mora that seems to be the key idea in Basbøll's account. The question is whether the notion of the mora, as an additional constituent intervening between the syllable and the phonemic string (Kenstowicz 1994: 293), is at all necessary (and in agreement with the Occam's razor principle). An additional question concerns the phonetic realism of the notion of the mora. As Basbøll seems to provide none one may conclude that the mora is a phonological construct of uncertain validity; many scholars believe that the mora is an abstract unit which can easily be dispensed with (for a discussion with reference to Japanese see Yoshida 1990). If the concept of the mora is rejected, the whole analysis collapses.

Larsen (1994) notes that there are basically two conditions for the occurrence of *stød*: stress (primary or secondary) and the make-up of segments that allows them to take *stød*. As noted above, only words with a long

vowel or with a sonorant consonant after a short stressed vowel can have stød. Voiceless obstruents are called “the stød refusing consonants” (Larsen 1994: 44). Our immediate question is why sonorants “attract” stød, while obstruents do not. But first let us try to find an alternative solution for the mora.

The difference between sonorants and obstruents is explained by Basbøll by means of moraicity (only sonorant consonants can be moraic in Danish (p. 275), in fact not all sonorants, but non-onset ones, i.e. sonorants in very specific syllabic configurations). If we reject the notion of the mora as superfluous, we have to find another explanation for the difference between the Danish sonorants and obstruents with respect to their stød-behaviour properties. A possible solution, one which runs against Basbøll’s position, is the assumption that Danish is a tonic (or metrical) lengthening language. On different occasions Basbøll stresses the difference between Norwegian, Icelandic (which he for some peculiar reason calls Icelandic, p. 131) and Swedish on the one side and Danish on the other side with respect to quantity. It is commonly held that both Norwegian, Icelandic and Swedish belong to the group of tonal lengthening languages (like Italian) as against Danish. In tonal lengthening languages the quantity is almost totally predictable and derives from the general properties of the syllable. The occurrence of long vowels is thus determined not only by the presence of stress but also by the number of consonants that follow the nucleus. In other words, long vowels can only be found in stressed open syllables, i.e. in syllables, where no coda consonant follows the vowel. In other cases, i.e. when the position of the rhymal complements is occupied, the vowel must be short (this is only a brief sketch of the conditions for the metrical lengthening of the vowel, since there are certain consonant clusters that allow the preceding vowel to lengthen, see Gussmann 2003). According to Basbøll, the general quantity rule familiar from the tonal lengthening languages does not apply to Danish, because phonologically short vowels in Danish are found in basically all contexts (p. 275), e.g. *lake* [laḡə] (seal (v.)), *tal* [tsal] (number). The point of view represented here by Basbøll must be said to be nothing more but an observation of surface phonetic facts, which do not necessarily have to have phonological consequences (see Ségéral and Scheer 2001 for a discussion on virtual geminates in phonology). Here I follow Larsen’s conclusion that Danish in fact is a tonal lengthening language much in the same sense as e.g. Norwegian or Swedish. What’s more, it is possible to claim, *contra* Basbøll, that Danish has underlying geminate consonants. By doing this, we do not need to refer to the moraicity of the sonorants, but rather to their status as underlying geminates. Hence stød is immediately ascribed to the heavy syllable (= to the branching rhyme).

Let us now turn back to the difference between the Danish sonorants and obstruents. In the framework represented by Larsen (1994), segments are assumed to be composed of melodic primes. According to this theory the main difference between sonorants and obstruents is the absence of the high tone element H in the melodic make-up of the former, but not in the latter consonants. Larsen's analysis shows convincingly that it is precisely the presence of the high tone element that makes the Danish obstruents "stød refusing". Further support for this can be found in some southern dialects of Danish, which lack stød, but which operate with the distinction between tonal accents instead, much the same as in Norwegian or Swedish (Larsen 1994: 129). As is well-known, it is precisely the high tone element that is responsible for the tonological distribution and other phonological phenomena, like for example preaspiration in Icelandic (cf. Gussmann 2000).

The assumption about the tonal lengthening nature of Danish and the association of stød with the absence of the high tone element in the melodic make-up of sonorants as proposed by Larsen, succeed in unifying in a convincing and clear manner a number of different facts in the Danish data. Regrettably, Basbøll's approach, although impressive in its empirical side, cannot be said to be either clear or convincing. No answer can be found as to why sonorants behave differently from obstruents and what constitutes "the natural class" of the stød syllables. On the other hand, Basbøll's solution for such intricate problem as the presence of stød in the verb form like *udtale* (pronounce), but its absence in the noun *udtale* (pronunciation), seems to be both interesting and worth pondering (p. 380f.). Instead of claiming that the distribution of stød is governed grammatically (different for different parts of speech), i.e. belonging at least to some extent to the lexicon rather than to the phonology of the language, Basbøll analyses Danish words for their structure, according to his Non-Stød Principle, expressed as follows:

- i. the penultimate syllable of the min-word has non-stød
- ii. a monosyllabic stem has non-stød before a syllable

Min-word is in Basbøll's modell on of three phonological domains. The two others are Basic Word and Max-word. The definitions of these domains are given on pages 377–379. Thus the verb *udtale* has the following structure:

$[(u\ d\ t\ a: l)\emptyset](=[(u:d) (t\ a: l)]\emptyset)$,

i.e. the stem of the verb is polysyllabic (*udtal*), hence it is not subject to the Non-Stød Principle described above. On the other hand the noun *udtale* has the min-word *tale* and is therefore subjected to this principle:

[(u:d) (tɑ:lə)]

This has interesting consequences for Basbøll's further approach on the phonology-morphology interface.

5. Conclusion

In the preceding pages I have tried to show that the main problem with Basbøll's book is the strictness with which the author follows his own theoretical assumptions and his failure to take a critical look at them. An impression the reader can get at times is that Basbøll contradicts himself and his own methodological foundations without being conscious of this. This is especially striking in the context of the Occam's razor. In my opinion, instead of simplifying the analyses, Basbøll multiplies complications and applies notions and ideas which obscure the presentation (cf. the concept of binary and multivalued features, Euler's circles, time dimension, sonority, moraicity and more). Very clearly, a general methodological principle like the Occam's razor can provide no direct insight into the phonological organisation and is no replacement for phonologically-based arguments for or against individual theoretical concepts. Particularly disappointing, especially in the context of his earlier works, which played a significant role in the development of generative phonology, is Basbøll's complete refusal to consider current theoretical trends and approaches that are subject of ongoing debate in phonology. Clearly, not all achievements of the different theories which blossomed after the demise of standard generative phonology can be said to have gained universal acceptance, but at least some of them (like the importance of the skeleton in the syllabic organisation of words) should not be passed by without a word of comment.

In a book of almost 600 pages, a consistent presentation of ideas is an achievement in itself. However, it was impossible to avoid a measure of repetitiveness involving not only sentences, but whole paragraphs and passages (cf. pp. 271 and 277, to name just one example). Doubtless, the best and strongest part of *The phonology of Danish* is the ease and professional competence with which Basbøll handles an impressive amount of data. Each chapter is very well documented with examples taken from Standard Danish, which Basbøll controls with an exceptional and unrivalled care characteristic not only of a competent and conscious native speaker of Danish, but also of a scholar who is well aware of the role of linguistic facts in his work.

The phonology of Danish by Hans Basbøll is the most comprehensive account to the phonology of the language that has ever been published. Although the impact of the author's personal (not to say private) views and methodology is in my opinion far too strong, the book is definitely a challenging and important contribution to the study of the Danish sound system and will surely remain the standard work in the area. One can hope that Basbøll's book will meet the attention of students of the phonology of Danish, but also those, who are interested in confronting phonological theories with data from a particular language. The body of data amassed by Basbøll will be used by other scholars and will lead to serious rethinking of some traditional concepts and ideas.

References

- Anderson, S. R. 1969. *West-Scandinavian vowel systems and the ordering of phonological rules*. Ph.D. dissertation. Cambridge, MA: MIT.
- Anderson, S. R. 1981. "Why phonology isn't natural". *Linguistic Inquiry* 12, 494–539.
- Árnason, K. 1980. *Quantity in historical phonology. Icelandic and related cases*. (= *Cambridge Studies in Linguistics* 30). Cambridge: Cambridge University Press.
- Basbøll, H. 1969. "The phoneme system of Advanced Standard Copenhagen". *Annual Reports of the Institute of Phonetics* 3, 33–54.
- Basbøll, H. 1972. "Some conditioning phonological factors for the pronunciation of short vowels in Danish with special reference to syllabification." In: Kiefer F. (ed.), 5–30.
- Basbøll, H. 1975. "Grammatical boundaries in phonology." *Annual Reports of the Institute of Phonetics* 9, 109–135.
- Basbøll, H. 1985. "Stød in Modern Danish." *Folia Linguistica* 19, 1–50.
- Basbøll, H. 1988. "The Modern Danish stød and phonological weight." In: Bertinetto P. and M. Loporcaro (eds), 119–152.
- Basbøll, H. 1998. "Nyt om stødet i moderne rigsdansk – om smaspillet mellem lydstruktur og ordgrammatik." *Danske Studier* 1998, 33–86.
- Basbøll, H. 2003. "Prosody, productivity and word structure: the stød pattern of Modern Danish." *Nordic Journal of Linguistics* 26.1, 5–44.
- Benediktsson, H. 1969. "The semivowels of Icelandic. Underlying vs. surface structure and phonological change." In: *Tilegnet Carl Hj. Borgstrøm. Et festskrift på 60-årsdagen fra hans elever*, Oslo: Universitetsforlaget, 13–29.
- Benediktsson, H. 1970. "Aspects of historical phonology." In: Benediktsson H. (ed.), 87–142.
- Benediktsson, H. (ed.). 1970. *The Nordic languages and modern linguistics*. Reykjavík: Vísindafélag Íslendinga.
- Bertinetto, P. M. and M. Loporcaro (eds). 1988. *Certamen Phonologicum. Papers from the 1987 Cortona Phonology Meeting*. Turin: Rosenberg and Sellier.
- Dziubalska-Kołaczyk, K. (ed.). 2001. *Constraints and preferences*. (= *Trends in linguistics. Studies and monographs* 134). Berlin–New York: Mouton de Gruyter.
- Elert, C.-Ch. 1966. *Allmän och svensk fonetik*. Stockholm: Almqvist & Wiksell.
- Elert, C.-Ch. 1970. *Ljud och ord i svenskan*. Almqvist & Wiksell.

- Eliasson, S. 1978. "Swedish quantity revisited." In: Gårding E. et al. (eds.), 111–122.
- Eliasson, S. 1985. "Stress alternations and vowel length: new evidence for an underlying nine-vowel system in Swedish." *Nordic Journal of Linguistics* 8, 101–129.
- Endresen, R. T. 1974. "On retroflex segments in Norwegian." *Norsk Tidsskrift for Sprogvidenskap* 28, 73–78. Reprinted in: Jahr E. H. and O. Lorentz (eds) 1981, 287–292.
- Endresen, R. T. 1977. "An alternative theory of stress and tonemes in Eastern Norwegian." *Norsk Tidsskrift for Sprogvidenskap* 31, 21–46. Reprinted in: Jahr E. H. and O. Lorentz (eds) 1983, 362–387.
- Fischer-Jørgensen, E. 1989. "Phonetic analysis of the stød in standard Danish." *Phonetica* 46, 1–59.
- Fischer-Jørgensen, E. 2001. *Tryk i ældre dansk. Sammensætninger og Afledninger*. Det Kongelige Danske Videnskabernes Selskab, Historisk-Filosofiske Meddelelser 84. Copenhagen: C.A.Reitzel.
- Fretheim, T. 1969. "Norwegian stress and quantity reconsidered." *Norsk Tidsskrift for Sprogvidenskap* 23, 76–96. Reprinted in: Jahr E. H. and O. Lorentz (eds) 1983, 315–334.
- Fretheim, T. 1974. "The Norwegian retroflex flap and the concept of 'natural class' in phonology." *Norsk Tidsskrift for Sprogvidenskap* 28, 79–85. Reprinted in: Jahr E. H. and O. Lorentz (eds) 1981, 293–299.
- Grønnum, N. and H. Basbøll. 2001. "Consonant length, stød and morae in Standard Danish." *Phonetica* 58, 230–253.
- Gussmann, E. 2000. "Icelandic preaspiration as a testing ground for phonological theories." In: Thórhallsdóttir G. (ed.), 93–103.
- Gussmann, E. 2003. "Are there branching onsets in Modern Icelandic?" In: Ploch S. (ed.), 321–337.
- Gussmann, E. 2004. "The irrelevance of phonetics: the Polish palatalisation of velars." *Corpus* 3, 125–152.
- Gårding, E. 1977. *The Scandinavian word accents*. Lund: CWK Gleerup.
- Gårding, E., G. Bruce and R. Bannert (eds) 1978. *Nordic prosody*. Lund: Department of Linguistics, University of Lund.
- Hagström, B. 1967. *Ändelsevokalerna i färöiskan. En fonetisk-fonologisk studie*. Stockholm Studies in Scandinavian Philology 6. Stockholm: Almqvist & Wiksell.
- Halle, M. 1961. "On the role of simplicity in linguistic descriptions." *Proceedings of Symposia in Applied Mathematics* XII, 89–94.
- Harris, J. 1994. *English sound structure*. Oxford: Blackwell.
- Hellberg, S. 1978. "Unnatural phonology." *Journal of Linguistics* 14, 129–375.
- Hellberg, S. 1980. "Apparent naturalness in Faroese phonology." *Nordic Journal of Linguistics* 3, 1–24.
- Hovdhauen, E., F. Karlsson, C. Henriksen and B. Sigurd 2000. *The history of linguistics in the Nordic countries*. Societas Scientiarum Fennica, Helsinki.
- Jahr, E. H. and O. Lorentz (eds) 1981. *Fonologi/Phonology*. Oslo: Novus forlag.
- Jahr, E. H. and O. Lorentz (eds) 1983. *Prosodi/Prosody*. Oslo: Novus forlag.
- Kenstowicz, M. 1994. *Phonology in generative grammar*. Oxford: Blackwell.
- Kiefer, F. (ed.). 1972. *Derivational processes*. Stockholm: KVAL.
- Kristoffersen, G. 2000. *The phonology of Norwegian*. (= *The phonology of the world's languages*). Oxford: Oxford UP.
- Larsen, U. B. 1994. *Some aspects of vowel length and stød in Modern Danish*. Unpublished M.A. Thesis. University of Paris 7.
- Petersen, H. P. 1993. "Skerpingin í føroyskum." In: Snædal M. and T. Sigurðardóttir (eds), 11–19.

- Petersen, H. P. 1999. "Metathesis in /skt/-sequences in Faroese." *Íslenskt mál og almenn málfræði* 21, 172–180.
- Ploch, S. 2003. "Metatheoretical problems in phonology with Occam's razor and non-*ad-hoc*-ness." In: Ploch S. (ed.), 149–201.
- Ploch, S. (ed.) 2003. *Living on the edge. 28 papers in honour of Jonathan Kaye* (= *Studies in generative grammar* 62). Berlin–New York: Mouton de Gruyter.
- Rischel, J. 1968. "Diphthongization in Faroese." *Acta Linguistica Hafniensia* 11, 89–118.
- Rischel, J. 1969. "Notes on the Danish vowel pattern." *Annual Reports of the Institute of Phonetics* 3, 177–205.
- Rischel, J. 1970. "Consonant gradation. A problem in Danish phonology and morphology." In: Benediktsson H. (ed.), 460–480.
- Rischel, J. 2001. "Om stødets opkomst." *Pluridicta* 38, 16–25.
- Ségéral, P. and T. Scheer. 2001. "Abstractness in phonology: the case of virtual geminates." In: Dziubalska-Kořaczyk K. (ed.), 311–337.
- Snædal, M. and T. Sigurđardóttir. (eds). 1993. *Frændafundur 1*. Reykjavík: Háskólaútgáfan.
- Thórhallsdóttir, G. (ed.). 2000. *The Nordic languages and modern linguistics 10*. Reykjavík: Institute of Linguistics.
- Thráinsson, H. 1978. "On the phonology of Icelandic preaspiration." *Nordic Journal of Linguistics* 1, 3–54.
- Thráinsson, H., H. P. Petersen, J. Í. L. Jacobsen, Z. S. Hansen 2004. *Faroese. An overview and reference grammar*. Tórshavn: Føroya Fróðskaparfelag.
- Yoshida, S. 1990. "A government-based analysis of the 'mora' in Japanese." *Phonology* 7, 331–351.