that this book can be much utilised as a standard textbook among Welsh learners.

(I wish to thank Dr Christine Jones of University of Wales, Lampeter, for her suggestion and comments on the book.)

Shizuoka University,   SATOKO ITO-MORINO
Japan

MARTIN J. BALL; BRIONY WILLIAMS, *Welsh Phonetics.* Lewiston, NY – Queenston, Ontario – Lampeter, Wales: The Edwin Mellen Press, 2001. xvi + 236 pp., USD 109.95. ISBN 0-773-47603-2. [Welsh Studies, 17]

Seventeenth in the series called Welsh Studies, this is the first, and so far only, linguistic volume in a series that is constituted chiefly of historical and literary themes, as well as of one autobiographical volume by the late D. Simon Evans, Professor of Welsh of Saint David's College of the University of Wales, Lampeter. This volume is neatly divided into three sections: transcriptional phonetics (1–90), instrumental phonetics (91–160), suprasegmental phonetics (161–214). The appendices are simply tables and symbols of the IPA (215–20) followed by a bibliography (221–32) and by an index (233–36). In Celtic linguistics, Martin Ball, of the University of Ulster, is known for his instrumental measurements of Welsh phonemes and his work on Welsh mutations and the transcription of speech disorders, whilst Briony Williams, now at the University of Coventry, is known for her work on Welsh stress and Welsh text-to-speech computer research. It is evident that the authors are primarily instrumental phoneticians and since the present reviewer is a dialectologist with experience of field-work and phonological transcription he will naturally pay closer scrutiny to the first half of the book.

A word about the exemplifying forms and sentences: neither author lives close to Welsh-speaking areas and this might go some way to explain a number of questionable examples. Some illustrative sentences do not seem to represent a genuinely colloquial source as they contain an unconvincing mix of northern and southern dialectal features. In *mae pen tost gen i* (7) we have neither southern coll. *ma' 'da fi ben tost* nor northern coll. *ma' gin i gur yn 'ym mhen* (also, the realisation tost for SW tɔst is unlikely). In ma ɔm 'mɪnd i laŋ'gɛvni to (11) we have a purportedly northern sentence with the southern reduction of *eto* to *'tô*. The implied SW kabaɪdʒ 'cabbage' (63) does not exist, it should be kabɛdʒ since the diphthong [aj] is found only in north-western dialects and contrary to what the authors say, *all* dialects of SW also have kabɛtʃ with an unvoiced cluster. NW əɪʃa 'eisiau' (115) for actual iʃɔ looks highly unlikely as does NW ɔɪri (48) for actual ɔjri and the purportedly northern nəɪ for *neu* 'or' (48) is a bookish pronunciation for NW ne. The south-eastern voicelessness of a medial voiced stop

is illustrated by NW form *tegell* (11) rather than SW form *teg(i)l* which furthermore is hardly ideal as as an example since it is derived from E. 'teakettle' (the NW pronunciation being tecaɬ is also unvoiced). SW kravi (27), whilst arguably not incorrect, would be better written kraˑvi. The transcriptions her (40), set (141), hɔf (114) are simply due to confusion between lowered and raised varieties of paired-vowels. In *mae lle 'ma fe* 'this is where it is' *mae* and *yma* (both pronounced [ma]) have been written one for the other, likewise *llun* and *llyn* have been incorrectly glossed respectively as 'lake' and 'picture' (30) and *tywyn* means 'dune' and not 'sea-shore' (48). The written form *lli* (40) is actually a NW pronunciation of *llif* 'flood' with a final consonant still commonly realised in SW. The authors contrast NW [χw-] with SW [w-] which is characteristic only of south-eastern Welsh (103): there is no mention of [ẘ-] – alternatively [hw-] – the most widespread SW realisation. In the section on orthography, the authors fail to point out that before 1928 the <-*au*> spelling tended to represent the sound when it was a plural suffix, whilst the <-*eu*> spelling tended to represent the same sound when it was not a plural, as in *goreu* for Modern *gorau* 'best' (81).

Luckily, most of the above criticisms of the examples that I refer to do not affect the tenor of the arguments and conclusions of the authors, which are generally sound. I must emphasise that most of the representations of realisations in the book are correct, though we must linger a while to consider the significance of such mistakes as have been noted. The nature of language means that any number of variant pronunciations are possible within a given speech, but linguists do have a duty to describe representative examples (or else explain the idiosyncracy of particular forms in relation to representative forms). In the same spirit as one of the authors' remarks (57) I look forward to the time when *real* phonological data is used and not *supposed* phonological data inferred by them or by their informants from dictionaries. Despite the fact that the authors point out that some exemplifying words are "archaic" (148), what is one to make of the use of obsolete medieval words such as *gwyth* 'anger', *hail* 'feast', *mau* 'mine', *tau* 'thine' (160) used in contrast with common twentieth-century words? Similarly, the transcription of *câi* 'will get' (3s imperfect of *cael*) as disyllabic /ka.i/ (160) does not represent any attested pronunciation. In some examples context and historical evidence are ignored in order to demonstrate phonetic developments. I feel obliged to comment on /maɪnt/ → /maɪn/ and /anadl/ → /anal/ (54) for whilst *maent* 'they are' can exist on its own *maen*, with the same meaning, cannot: it is always *maen nhw*. Also, it is /anaðl/ not /anadl/ which gave /anal/.

The examples of variation of the same word due to tempo between lento and allegro forms are unconvincing in *cartref* /kartrɛ/ vs. /katrɛ/ (55) and *mae* /maɪ/ vs. /ma/ (57) (the latter contrast – more correctly transcribed as /mɑ/ vs. /ma/ – is actually a case of an emphasised form versus a non-emphasised form). The contrast between emphasised and non-emphasised forms explains the variation between the accentuation of conjugated verbal forms such as *caf i* 'I will have', *gwelodd e* 'he saw' which are realised

emphatically as ˈkaˈiː, ˈgwe-lɔðˈe: against the non-emphatical and usual re-alisations ˈkaj, ˈgwe·lɔðɛ. Note that the accentuation of a trisyllabic exam-ple such as ˈgwelɔðɛ – which can be noted ˈgwelɔð-ɛ with morphological con-siderations in mind – is identical to that class of words which the authors derive exclusively from English loan-words such as *melodi* ˈmɛlɔdi (202). From the examples given, there seems to be some terminological confusion between the use of elision and reduction (50, 54–55). The authors restrict elision to reduction in comparison with 'the citation form', but literary ci-tation forms originating in dictionaries do not always correspond to the ci-tation forms of considered speech, which is demonstrated by the word *aderyn* 'bird' where the elided form /dɛrɪn/ has nothing to do with the rate of speech but is a definitive elision as can be seen by the lenited forms found in every dialect of Welsh: *dau/dou dderyn* (I prefer to restrict reduction as a term to describe the 'dulling' of vowels to schwa in pre-stress syllables e. g. *cadeiriau* kəˈdejrɛ from *cadair* ˈkadɛr).

The authors give separate chapters for consonants, monophthongs and diphthongs but consonant clusters are hastily dealt with (23–24) and we are referred to a nonexistent chapter 15 for further details on consonant phonotactics (chapter 14 on suprasegmentals being the final chapter). I have some reservations about the otherwise interesting subject of the eli-sion of stressed syllables (55–56, 204). Firstly, it is evident that gwnɔɪd 'to do, to make' is one syllable and is thus irrelevant as an example. Secondly the demonstratives *dyna* ..., *dyma* ..., *dacw* ..., *gyda* ..., *wedi* ... are au-tomatically followed by another stressed word and are thus only weakly stressed if not unstressed within any phrase in which they are used, as was pointed out long ago by D. M. Jones 1949 *BBCS* 13.64, T. A. Watkins in 1972 *BBCS* 25.3 as well as by our authors (204). These examples of syllable eli-sions should therefore have been treated as an effect of suprasegmental phonology and the same could be said for the reduced forms of *gallwn ni* and other verbal forms. This leaves only *eto, hefyd, fachan* (vocative of *bachan*) as valid quoted examples of the elision of a stressed syllable. The weakening of the stressed syllable from [a] to [ə] in south-eastern Welsh has not the same origin as the reduction of the stressed syllable, but is due to the succeeding strong consonant, whether geminate or cluster, as I have explained in pages 108, 111–14 of Iwan Wmffre, *Language and Place-names in Wales: the Evidence of Toponymy in Cardiganshire*, Cardiff: University of Wales Press, 2003.

The question of a phonological transcriptional convention for Welsh is a vexed one for anyone attempting to see Welsh as a single phonological sys-tem since we are faced with an apparently fundamental and obdurate dis-crepancy between NW vowels which show a quantity-emphasised distinc-tion against SW vowels which show a quality-emphasised distinction. This real enough dichotomy between NW and SW vowel systems is exaggerat-ed by the persistence of 'systemists' to seek economy of transcription by neglecting the fact that contrasts of quantity *and* quality exist in all di-alects of Welsh, see note 6 in page 8 of I. Wmffre 2003 *op cit.* (though I am bound to point out a lapse in the second column under 'sW. (Cards.)' where

one should read '<ô> [oː]' rather than the actually published '<e> [eː]'). After discussing this question, the authors opt for what they term the 'British [= English] tradition' of favouring quality at the expense of quantity (9–10, 29–33) which makes them adherents to the school of Welsh phoneticians inaugurated in the 1960s by Ceinwen Thomas of Cardiff. The logic of a quality-based transcription which does away with marks of length has led to the use of /ɑ/ (39) for what is [aː, æː, ɛː] according to dialect in Welsh, but never [ɑː] (pace 151, 152). The use of /ɑ/ for what is generally /aː/ is misleading to anyone familiar with the IPA and unfamiliar with Welsh for /ɑ/ is in reality an English realisation of a long <a>, as is demonstrated by the English tourists a few years ago who enquired for a house which I thought was *Dolwen* but which turned out to be *Dalarwen* (they had pronounced something like *dɑləˈwɛn rather than daːlarˈwɛn).

Similarly, despite belonging to a tradition initiated by Henry Sweet in 1888 and reinforced by John Morris-Jones in 1913, the transcriptions of the first element of the diphthong <ei> and the northern diphthong <eu> as /əɪ/ and /əɨ/ respectively (44–45), are misleading as they are better represented as /eɪ/ and the more northern /eɪ/ and /eɨ/. The realisation [əj], found in industrial south-eastern Wales, shows the influence of the English of that area as can be illustrated by a young Welsh schoolboy near Carmarthen, in south-western Wales, who chided his mother – brought up in south-eastern Wales – for having pronounced *tei* 'tie' as təj rather than tej (p. c. Robert Déry). The realisation /əʊ/ rather than /oʊ/ for the diphthong <yw> in non-final position is most often the result of a reading pronunciation and it is misleading to downgrade the realisations [eɪ] and [oʊ] as realisations "used by some speakers in free variation" (46–47). This leads us to the problematic question of which type of Welsh are the authors describing. We are told (10) that the authors recognise two accents, those of educated speakers of NW and SW, but the labelling of the realisation of monophthongal <ae> as /aɪ/ as the 'educated accent' of SW fails to explain that [aj] is the bookish, reading pronunciation for most examples of monophthongal <ae> in SW and, except for affected, unrepresentative individuals, the spoken realisation is [aː] even for educated speakers. The authors seem to adhere to a long-established learned ignorance of accentually-governed diphthong alternation – often found written in names such as *Haulfan* and *Mairwen* – when they transcribe realisations such as NW ɫaɪθdɨ SW ɫaɪθdɨ (26, 27), NW saɪθɨ SW saɪθɨ (26, 27). The retreat of NW /ɨ/ before /i/ is presented as a given (130) though no proper evidence for it has ever been presented in the literature. From my own research and field-work I believe it unlikely and the authors' resort to it as an explanation for the particular realisation of /ɨ/ in the Bala area is likely to be wrong (138).

The authors discuss the relative merits of transcribing the glides of diphthongs as either [-ɪ, -ʊ] or as [-j, -w] (41–42). Their conclusion is that "the arguments in our opinion are equally balanced" and they then prefer the former "In keeping with the British phonetic tradition". I beg to differ with their conclusion since it is clear that a diphthongal transcription with

[-j, -w] dispenses with the ambiguity inherent with [-ɪ, -ʊ] or [-i, -u] which as our authors themselves point out (41) leads to the need for disambiguating extra-transcriptional markers such as the period in /sbi.o/ to emphasise a disyllable or an under-tie in [a‿i] to emphasise a diphthong. As Eric P. Hamp has stated "For nothing at all I favour nothing at all." (1988 'On the representation of Scottish dialect phonetics' in *Scottish Gaelic Studies* 15, p. 13). The British (or rather English) phonetic tradition has no great need to disambiguate diphthongs from disyllables (vowels in hiatus) as the latter are mostly nonexistent in English. I have demonstrated at some length (Wmffre 2003 *op cit.* pp. 15–20) that there are good reasons, both phonemic and stylistic, to prefer the transcription with [-j, -w] for Welsh. The fact that the distinction between diphthongs and disyllables is necessary mostly on an allophonic level, does not allow one to discount the need to transcribe Welsh diphthongs with [-j, -w]. As useful a concept as it is, a fixation with phonemes and an overly 'systemic' ascription of sounds to particular phonemes results in giving the erroneous impression that a given speech is a monolithic structure as does the additional presupposition that it is insulated from other varieties. But which variety of speech is wholly invariant and wholly insulated from other varieties (geographical or societal) whose features impinge onto the pre-existing 'system'? On the peripheries of the phonemic system of any given variety of speech lie any number of allophones with the potential to develop into phonemes. Overly 'systemic' phoneme inventories inhibit the recognition of variation as normal in any given speech.

One should always beware of conceiving of a given speech as constituting a single phonological system, rather one should conceive of interweaving phonological systems, often in conflict. The authors seem to have decided that Welsh is a single phonological system and that the phonemic transcription adopted in their book requires compatability between the obviously conflicting northern and southern Welsh phonemic systems (45). This leads to serious theoretical and practical problems as to what the 'phonemic' slashes in the book mean since they cannot be assumed to represent a single phonemic system. The only way to unite the conflicts in the phonemic systems that exist in contemporary Welsh is to class them according to an appropriate dialectal or historical context, that is to engage in dialectology and in diachronic linguistics. To give an example, by choosing /ai/ rather /ɑ/ as the basic SW form of the graphemic diphthong <*ae*> the authors have subjectively preferred a 'reading' form rather than the ordinary contemporary and historically attested form. Since /aɪ/ is largely unrepresentative of real speech it would surely be simpler and better to accord with the binary logic of phoneme and phone to keep NW /ɑɨ/ as the basic Welsh phonemic form with an indication that the SW phonetic realisations are [ɑ ~ aɪ] according to context. Because of their wish to conflate the SW and NW Systems as much as possible the authors shy away from transcribing the northern diphthongs more correctly as /oɨ/, /uɨ/ and instead contrast NW /ɔɪ/, /ʊɪ/ with SW /ɔɪ/, /ʊɪ/ (44–45). But in following this logic why do they not seek further compatability by viewing SW [ɔɪ], [ʊɪ]

as allophones of their northern equivalents with [-ɪ]? The 'less formal' variant of the SW <oe> is /o/ not /ɔ/ (45).

Despite transcribing the realisation of the first element of the diphthong of *llew* 'lion' as short in SW and long in NW the phonemic transcriptions of both varieties is given as /ɬɛʊ/ (48). Why is NW not transcribed as /ɬeʊ/? Presumably because it should not contrast with the same diphthong in a derivative such as *llewod* 'lions' /ɬɛʊɔd/. Here is a fine example of considerations of economy blurring a clear realisational contrast between SW /ɬɛw/ and NW /ɬeːw/ (and the same can be said of *llaw* and *llawen* on the same page). So called 'economies' can prove to be false ones and the reviewer questions why such morphological considerations are not followed up in the case of *gwyrdd* pl. *gwyrddion* 'green' which are transcribed by the authors gwɪrð and gwərðjɔn (84). The authors mislead when they claim /ə/ exists in the system of Pembrokeshire Welsh just because it is found in some lexical items (61, 62). This depends upon *which* Pembrokeshire Welsh variety one is talking about. It is true that there are examples of /ə/ which impinge from without into some Pembrokeshire dialects, but in those Pembrokeshire dialects where schwa is excluded, it is excluded in the exact same context which the authors use to justify /ə/ as a phoneme, viz. *dy* 'your' realised as [di].

The authors talk favourably of "norms of accepted practice" developed by phoneticians of English and somewhat disparagingly of "competing norms" (5–6). Presumably advocate the standardisation of the phonetic transcription of Welsh. And whilst there is an undoubted need for consistency, the reviewer feels that the phonetic standardisation operated for English is not positive in all respects and has to some extent developed into a rigid parallel orthography where the underlying phonetic 'facts' are hidden by layers of conventions. The reviewer is also uneasy about a binary opposition between *a* phonemic transcription and *a* phonetic transcription as if they were completely unrelated methods of transcribing sounds, surely it is better to think in terms of a broad phonetic transcription that respects phonemic facts and a multiplicity of ever-narrowing levels of phonetic transcriptions.

For reasons mentioned above, the reviewer cannot do proper justice to the second half of the book which concerns instrumental and suprasegmental phonetics. Suffice it to say that this important part of their work is the first book-length treatment of these two hitherto neglected subjects and as such will constitute for Welsh the first stepping stone to this expanding branch of phonetics. I must mention the summary of Briony Williams's 1983 PhD thesis findings (182–85) as many will first learn here of the evidence she has brought forward that it is duration (and possibly loudness) which highlights the final syllable in Welsh and *not* pitch as has usually been reported from auditory impressions. Arguably, the sections summarising the auditory impressions of pioneers of Welsh phonetic description (118–23) and the detailing of an experiment on cross-dialectal perception (153–59) should not have been placed in chapters dealing with instrumental phonetics. The conventions for transcribing speech disorders (212, 219) will be found useful.

Reference is made to various acoustic and articulatory measurements of Welsh phonemes though the reviewer was disappointed that no general comparison of the various techniques and their application is given. Could this have been done without going into too much complexity of detail? The historical development of instrumental measurements of Welsh phonemes is also lacking (138–39), with nothing about the work of J.J. Glanmor Davies 1934 and Vincent H. Phillips 1955, and only cursory mentions of the kymograph measurements of Alf Sommerfelt 1926 (123) and T. Arwyn Watkins 1953 (174). There is a little more about the spectograph measurements of Magne Oftedal 1969 (126–38) because of the reprise of a 1984 article of Martin Ball which criticised Oftedal's findings. It is the authors themselves, of course, who can be considered the developers of the discipline of instrumental measurement of phonemes in Welsh since the 1970s and this book usefully presents their work. Despite a very short description of Williams's important work on text-to-speech (198–99) the reviewer was rather disappointed that the book did not mention the state of research for Welsh regarding speech-to-text – the holy grail of phonetics – which promises, in the not too distant future, to revolutionise the way we interact with computers. I suspect that work on speech-to-text has not yet been initiated for Welsh, but it would have been salutary for the authors to have alerted readers to the most practical benefit phonetics could contribute to society.

Cross-referencing by chapters, e. g. "Chapter 2" (99) could be improved were they given as "pages 17–18" and tables 11.7–9 (158) would have gained in clarity had the actual words been included rather than replaced by "token 1, token 2, etc". A glossary is wanted especially in the case of some technical terms which this reviewer did not immediately understand. Examples are: "FO" (169) nowhere explained, as well as "foot" (175) and "'nuclear' pitch patterns" (182)/"nuclear tone types" (190) which are not clearly explained. A final desideratum: is it also not about time that a hardcover book treating linguistics of Welsh in such detail should be accompanied by a CD-ROM inserted in the inside-back cover to exemplify and clarify particular points not otherwise easily understood?

That the second and third sections dealing with instrumental and suprasegmental research sometimes read like specialised pioneering monographs cannot be helped and the authors candidly state this on more than one occasion. But to describe the first section of the book in contrast as a "complete guide" (ix) to the transcriptional phonetics of Welsh is to go rather too far, though this is not to deny that the presentation there is clear, well-ordered and judicious. Finally, despite all the emphasis on criticisms in this review, this book undoubtedly constitutes a considerable advance on previous work in the discipline and deserves the attention of everyone interested in the phonetics of Welsh.

Department of Celtic   Iwan Wmffre
Catholic University of Lublin
Poland