Form, Meaning and Function in Theoretical and Applied Linguistics

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Edited by
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FOREWORD

Form, meaning and function is a triad which captures the multidimensional character of human language. In terms of communication, it encompasses the signal and its formal organisation (or structure), the concepts, i.e., the meaning conveyed, and the use with all intentions and discourse purposes. When linguistic analysis is taken into consideration, the three-way distinction appears less clear-cut. Therefore, any investigation that is conducted with the acknowledgement of the fact that these elements are interrelated contributes to a better understanding of the nature of language. This approach has been a motivation to bring together researchers representing different fields of linguistics – both theoretical and applied – that reflect the intertwining of form, meaning and function.

The volume includes the following contributions:

Tomasz Czerniak sets out to discuss the properties of Bangor Welsh diphthongs and makes an attempt at a phonotactic description utilising the Lateral Theory of Phonology (LTP). Theoretical and empirical arguments are put forward in this chapter so as to provide a representation that could bring us one step closer to the explanation of their unique behaviour. In search of the underlying representation, the Author discusses the distributional differences between diphthongs and long vowels in the dialect in question and excludes vowel+glide interpretation of the former. The analysis conducted in the light of LTP and Element Theory shows that Bangor Welsh diphthongs are right-headed structures with Infrasegmental Government relation, characteristic of branching Onsets.

Sławomir Zdziebko's contribution is concerned with consonant palatalization in Polish viewed from the perspective of the Element Theory. He discusses five types of this morpho-phonological process that lead to relevant structural changes, in particular I-Anterior Palatalization, 1st and 2nd Velar Palatalization, Spirant Palatalization and Affricate Palatalization. They are characterised as element addition whose output is regulated by Mutation Enforcement Principle and Structure Preservation.

Chapter by Ewelina Prażmo offers a comprehensive study of the *-ing* formations in Polish. The major focus is to account for their intersubjective and dynamic nature in terms of the identification of possible cognitive mechanisms underlying their creation. Fauconnier and Turner's (2002) conceptual integration theory combined with Langacker's (2008) current

discourse space model and the theory of speaker-hearer "mind integration" (cf. Langacker 2007) have been adopted. One of the conclusions drawn from the study is that a substantial number of the *-ing* formations in Polish refer to free time activities, holidaying and relaxing, a large majority of which tend to be related to drinking alcohol. Interestingly, no such associations have been found when the *-ing* suffix is used natively in English.

The chapter by Konrad Żyśko is an attempt to reach a consensus on the nature of wordplay in relation to similarity of linguistic forms and ambiguity. The study also addresses the problem of distinguishing between ambiguity and vagueness, as well as between polysemy and homonymy in relation to wordplay. The author concludes that wordplay based on apparent homonymy may have the potential to point towards some hidden sense relations which are no longer perceived synchronically.

The chapter by Aleksandra Gogłoza examines the theory of a fine-grained verbal and nominal functional sequence, as proposed by Jabłońska (2007), with an emphasis on the degrees of externality and the Dative Reflexive Construction (DRC) in Polish. In particular, the Author argues for a modification to Jabłońska's nominal functional hierarchy, which reduces the levels of projections, and for the dissociation of this hierarchy from the notion of Case. To this end, two separate levels of analysis are proposed (i.e., nominal f_{seq} and Case), and the Peeling Theory of Case of Caha (2009) is employed to account for Case selection in the Polish DRC.

Kinga Lis explores the issue of lexical convergence between Middle English, Middle French and Anglo-Norman Psalters. The Author analyses lexical items from the Middle English Glossed Prose Psalter and Richard Rolle's Psalter (Middle English renditions) that are convergent with the Middle French Glossed Psalter and the Montebourg/Oxford Psalter (Anglo-Norman rendition) in order to determine the degree of French influence and establish how the abovementioned renditions are correlated.

Language acquisition in bilingual children is the problem addressed by Bibiána Bobčáková. The Chapter offers a case study of a linguistic development of an English-Slovak bilingual child whose both parents are Slovak native speakers and English is the language spoken to the child by his mother. The challenge confronted by the Author is to examine the quality and timeline of the acquired language patterns. The results of the study are confronted with those obtained by children whose parents' first language is English. Moreover, the growth in mean utterance length and the developmental process of bilingual acquisition are also investigated.

Elwira Szehidewicz investigates the influence of relevance theory's understanding of concepts on the achievement of transparency of meaning

in psychotherapeutic discourse. The Chapter offers an analysis of the concepts TIRED and NEUROSIS in the context of a psychotherapeutic session. The main aim of the study is to prove that the psychotherapist's awareness of the features of concepts in relevance theory may help to develop transparency of meaning in therapeutic performance.

Bartholomäus Nowak delves into the phenomenon of impoliteness in political debates. He concentrates on face-threatening acts (FTA) utilised by politicians in the context of the "Amber Gold" scandal. The main focus is on explicit and unambiguous mentioning of party labels and metadiscursive references of defenders and attackers in talk-show discussions. The analysis sheds more light on the functions of these strategies.

The chapter by Paweł Tutka offers an in-depth discussion of the role of translation studies in the fast-growing field of video game localization. The function of translation itself in the process of localization is examined, with an emphasis on the interdependence of these two concepts and their significance with respect to the notion of gameplay fidelity. The Author argues that, in order to successfully 'translate' a game, the translator's skill set needs to incorporate a wide spectrum of non-standard competences, not only exceptional and diverse linguistic and technical skills, but also creativity linked with product awareness and, preferably, experience as a player. It is observed that not only can translation studies contribute to enhancing the effectiveness and quality of video game localization, but also research into this process and its products may be instrumental in extending our theoretical and practical knowledge of the translation process in general, and, consequently, in the education of professional translators, which, according to the Author, should include mastering skills relevant from the perspective of video game localization.

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PART I:

THEORETICAL LINGUISTICS

CHAPTER ONE

BANGOR WELSH DIPHTHONGS AS RIGHT-HEADED STRUCTURES: REDUCING AMBIVALENCY

TOMASZ CZERNIAK

1. Introduction

A phonological analysis of Welsh diphthongs has proven to be a thankless task leading researchers to disparate conclusions. A rigorous descriptive treatment of Welsh diphthongal inventory presents a number of problems. First of all, the dialect dispersion of the Welsh language includes a division into many regional accents and stylistic varieties without an unquestionable standard (c.f. Jones 1961, xi). However, the Bangor dialect of Welsh is a well-documented (e.g., Fynes-Clinton 1913; Ball and Williams 2001, Ellis et al. 2001) representative of the North Welsh dialect group. What is characteristic of this variety of Welsh is the presence of the high central vowel [ɨ] which enriches the diphthong inventory of the system. Secondly, various transcriptional traditions employed by authors (Sweet 1913 [1884]; Morris-Jones 1913; Jones 1984; Awbery 1986; Ball and Williams 2001; Hannahs 2013) reflect the lack of agreement and consistency between researchers, which makes it increasingly difficult to relate works to each other. Thirdly, early accounts of North Welsh diphthongs show signs of disagreement concerning the number (Sweet 1913 [1884]; Evans 1910; Morris-Jones 1913) of diphthongs and their syllabic assignment (i.e., whether both members are tauto- or heterosyllabic).

This chapter is an endeavour to present a consistent phonotactic description of Bangor diphthongs and explain their phonological behaviour. The analysis will be conducted from the viewpoint of the Lateral Theory of Phonology (LTP/CVCV). It will be proposed, based on the disparate behaviour of long vowels and diphthongs in Bangor Welsh, that long vowels are left-headed structures and require further licensing to remain

long, while diphthongs are right-headed structures free of similar positional and contextual restrictions.

Section 2 provides a short synopsis of the phonetic and phonological argument over the status of Welsh diphthongs, starting with traditional descriptive accounts and finishing with modern theoretical solutions. Section 3 is a presentation of contextual factors governing the occurrence of long vowels and diphthongs and a theoretically-neutral comparison of their distribution. The difficulties in representing Welsh diphthongs as vowel-glide sequences are discussed in section 4, where it is concluded that the consonantal inventory and phonotactics would be severely altered by such an analysis. The inventory of North Welsh diphthongs is presented and briefly discussed in section 5. Sections 6 and 7 present the theoretical assumptions of CVCV concerning syllable structure in general and vocalic relations in particular. Within the theory presented, sections 8 and 9 lay out propositions concerning right-headedness of Welsh diphthongs as self-licensed structures which enter into a relation which is conditioned melodically – the element present in the second member of a diphthong must be absent from the composition of the first member. Such a relation resembles to a large extent what was dubbed Infrasegmental Government and employed for representing asymmetric relations between Onsets. However accurate the propositions put forward in the following sections might be, they are not free of shortcomings which are discussed in section 10. Nevertheless, both theoretical and empirical arguments are presented to support the analysis, and implications for further research are indicated.

2. A brief revision of the dispute over Welsh diphthongs

Welsh diphthongs are peculiar structures and they seem to have been a bone of contention to phoneticians and phonologists regardless of their theoretical inclinations. Some of the earliest English-language descriptive publications on diphthongal phonemes include Sweet (1913 [1884]), Evans (1910), and Morris-Jones (1913; 1921), where the actual number of Welsh diphthongs and their classification is problematic. While more up-to-date accounts (Jones 1984; Ball and Williams 2001; Mayr and Davies 2011) are capable of arriving at a finite set of diphthongs, the precise phonological character of these structures remains questionable (c.f. Awbery 1984; 1986; Buczek-Zawiła 2002; Iosad 2012).

Sweet (1913 [1884], 414–17) enumerates twenty vocalic phonemes which may or may not have quantitatively distinctive counterparts, and thirteen of which are clearly composed of more than one member.

Unfortunately, there is no distinction between uniform vowels and diphthongs nor any indication of the (non-)hiatus status of the latter. Evans (1910, 3), on the other hand, distinguishes diphthongs as a separate class of phonemes which are characterised as two dissimilar vowels uttered with uninterrupted pronunciation.

Interestingly, Morris-Jones (1913, 31–65 and 1921, 6–12) discusses diphthongs in a section concerning phonotactic combinability rather than vowels. In his view, diphthongs are combinations of glides and vowels where the falling diphthongs are those where the glide follows the vowel (VJ), and the rising ones are those where the vowel is preceded by the glide (JV). Although it is not explicitly stated, what is meant by the terms falling and rising in Morris-Jones's account is the slope of sonority within a combination.

A diphthong in Gimsonian tradition is a gliding vowel with a starting point and a quality change within one syllable (Cruttenden 2008, 36–7, 134). Such a treatment of Welsh diphthongs appears to have been adopted by Jones (1984, 57–61), who enumerates three series of the total thirteen of the North Welsh vocalic combinations. Additionally, the length of the first member is attributed to positional factors and regarded as allophonic.

Ball and Williams (2001) analyse the phonetics of the Southern and Northern diphthongs extensively (41–47, 147–60) to come to the conclusion that there are thirteen diphthongs in North Welsh, all of which are made of two vocalic segments rather than vocalic and semi-vocalic ones. Moreover, the second member of a diphthong should be transcribed as a lax vowel for it never reaches the fully close articulation (all of the Welsh diphthongs are closing). This disproves the VJ analysis, at least on phonetic grounds.

Conversely, Awbery (1984, 90–98) observes that distributional constraints on diphthongs overlap with those on the single vowels which constitute the first member of a diphthong. In other words, it is not diphthongs as such whose distribution is constrained but their first member which is a monophthong. By proposing that Welsh diphthongs are made of vowels followed by glides, she embraces the greater distributional freedom of diphthongs over long vowels and the fact that the first member might be lengthened. It should be borne in mind that this proposal was based not on phonetic facts but on distributional properties and phonological assumptions.

Buczek-Zawiła (2002, 28) conducts a Government Phonology analysis and proposes that the phonological structure of a Welsh diphthong be a pair of nuclei separated with a pointless onset. In this approach the on-glide and the off-glide are two vocalic segments (not a vowel and a

consonantal glide) whose diphthongal interpretation is imposed by a relation between the two nuclei.

The parallel behaviour of glides and high vowels in Welsh was taken up within Optimality Theory by Iosad (2012, 147–55), who argues both members of the diphthong are vocalic elements but, unlike long vowels, they are monomoraic. Further, on account of various glide-vowel alternations present in the language, he assumes that glides [w], [j] and vowels [u], [i] are composed of the same features, respectively.

All in all, there has been disagreement as for both phonetic and phonological treatment of diphthongs in Welsh. Modern technology (Ball and Williams 2001; Mayr and Davies 2011) has enabled a thorough acoustic and articulatory study of the Welsh diphthongs, while different theoretical frameworks (Awbery 1986; Buczek-Zawiła 2002; Iosad 2012) arrive at inconsistent conclusions.

3. Distributional disproportion between long vowels and diphthongs

It has been observed by many researchers (e.g., Morris-Jones 1913, 65–74; Awbery 1984, 65–81; Wood 1988; Griffen 1989; Bednarska 2011; Hannahs 2013, 28–34; Czerniak 2014) that the distribution of Welsh long vowels is highly constrained and, in fact, much more constrained than that of diphthongs. They cannot occupy an unstressed syllable or be followed by a cluster. What is more, some single consonants, namely voiceless stops, nasals and liquids, are known to block the length of the preceding vowel.[1] As far as the northern varieties of Welsh are concerned, there are further restrictions upon the length of vowels, for they can occupy only the final syllable of a domain provided it is stressed. Thus, only monosyllabic words and those with irregular stress on the final syllable will be able to accommodate a long vowel, on condition that it is not followed by a cluster. Interestingly, there is only one type of cluster that allows a preceding vowel to lengthen – a sibilant followed by a stop. The distribution of long vowels in North Welsh is illustrated below (Fynes-Clinton 1913):

[1] See for example Wood (1988) for an analysis of historical developments that have led to the absence of long vowels before certain sonorants in Modern Welsh.

(1)	a.	[goːg]	*côg*	‘cuckoo’
		[friːð]	*ffridd*	‘enclosed rough mountain pasture’
		[dɑː]	*da*	‘good’
	b.	[ˈkɑmˈdroː]	*camdro*	‘crookedness in dealing’
		[kɑnjɑˈtɑːd]	*caniattâd*	‘permission’
	c.	[dɨːsk]	*dŷsg*	‘learning’
		[fɪːst]	*ffust*	‘flail’
		[fɨːɬt]	*ffull*	‘trod’
		[dɑːɬt]	*dallt*	‘to understand’
	d.	[durn]	*dwrn*	‘fist’
		[plɑnt]	*plant*	‘children’
		[skert]	*sgert*	‘skirt’
		[pɑrχ]	*parch*	‘respect’
		[ovn]	*ofn*	‘fear’
		[dɑdl]	*dadl*	‘dispute’

The examples above show that long vowels can occur before a voiced stop, a fricative, in an open syllable and before a cluster made of a sibilant followed by a stop (1a–c), and that they must remain short before any other type of cluster regardless of its sonority profile (1d). Curiously enough, the (re)introduction of long vowels before voiceless stops and before certain sonorants due to borrowing from English gave rise to new minimal pairs and possible phonemicisation of vowel length, thus the restrictions upon the distribution of long vowels should be approached with caution and treated as a preference of some Welsh speakers rather than an absolute truth about vowel quantity in the language. Let us now turn to the distribution of diphthongs (Fynes-Clinton 1913):

(2)	a.	[glɑːu]	*glaw*	‘rain’
		[gleːu]	*glew*	‘hearty’
		[mɑi]	*mai*	‘that’
		[pɑrɑˈtoi]	*paratoi*	‘to prepare’
	b.	[fruːɨθ]	*ffrwyth*	‘fruit’
		[knɑud]	*cnawd*	‘flesh’

c.	[deur]	*dewr*	‘brave’
	[diɑul]	*diawl*	‘devil’
	[hɑːɨl]	*hael*	‘generous’
	[froːɨn]	*ffroen*	‘nostril’
	[kleut]	*clewt*	‘clout’
d.	[gəist]	*geist*	‘bitch.pl’
	[gəivr]	*geifr*	‘goat.pl’
	[gwəilχ]	*gweilch*	‘a kind of a hawk.pl’
	[mɑint]	*maint*	‘size’
	[mɑiŋk]	*mainc*	‘bench’
e.	[ˈduːiðɑ]	*diwethaf*	‘last’
	[ˈgloivi]	*gloywi*	‘to polish’
	[ˈkroiso]	*croeso*	‘welcome’
	[dəsˈkləidjɑ]	*dysgleidiau*	‘dishful.pl’
f.	[ˈdɑɨblɨg]	*deublyg*	‘to fall doubled up’
	[ˈdjəuljo]	*diawlio*	‘to swear’
	[ˈəidjon]	*eidion*	‘bullock’
	[ˈfəilʃon]	*ffeilsion*	‘false.pl’
	[ˈgwəiθjɑ]	*gweithiau*	‘work.pl’
	[ˈhəiɬtjon]	*heilltion*	‘salty.pl’
g.	[ˈegluɨs]	*eglwys*	‘church’
	[ˈgobɑiθ]	*gobaith*	‘hope’
	[doiˈθinɑb]	*doithineb*	‘wisdom’
	[ˈtrɑmguɨð]	*tramgwydd*	‘offence’
	[ˈəspɑid]	*ysbaid*	‘space’

Prior to the discussion of the data above, a handful of phonological facts about Welsh need to be introduced. First, Welsh regular stress falls on the penultimate syllable of longer words. Second, if a diphthong occupies a stressed syllable, its first member might be phonetically longer. Third, some of these word-forms are morphologically complex and the consonants which follow a diphthong might form a cluster for that reason.

Examples in (2a) and (2b) contain diphthongs in the stressed final syllable possibly followed by a single consonant, which is parallel to the distribution of long vowels. The situation is somewhat more complicated when it comes to (2c), which contains diphthongs followed by a sonorant, which is not impossible for long vowels but definitely less common. (2d)

encompasses consonant clusters which, with the exception of [st], would block vowel length compared to unit vowels. Diphthongs placed in the non-final yet stressed syllable are listed in (2e). The examples in (2f) represent environments which would exclude long vowels for two reasons, namely they are found in a non-final syllable and are followed by consonant clusters. Finally, diphthongs may occupy unstressed syllables in both final and non-final position as is illustrated in (2g).

To recapitulate, (North) Welsh diphthongs are considerably less restricted distributionally than long vowels in the system. They can be found in both stressed and unstressed, final and non-final, open and closed syllables. They can be followed by a single consonant of whatever type (a sonorant, a voiceless stop) and a consonant cluster regardless of its sonority profile (TR or RT).[2] A phonological analysis, therefore, must embrace both the existence of complex vocalic structures and the discrepancy in their behaviour.

4. Why are vowel-glide sequences out of the question?

There are two main reasons why North Welsh diphthongs cannot be analysed as vowels followed by consonantal glides. One reason is connected with phonotactic restrictions and the other with richness of the inventory. Both these arguments are descriptive and neutral to the theory.

The right edge of the word in Welsh is restrictive and permits only single consonants or two-member consonant clusters on even or falling sonority profile, i.e., stop-stop, fricative stop, sonorant-obstruent and sonorant-sonorant (Awbery 1984, 87; 2010, 371–72; Hannahs 2013, 36). Clusters of rising sonority (TR) must undergo either epenthesis or metathesis. Although this statement is largely over-generalising, there cannot be found three-member clusters of whatever sonority profile if they are not followed by a vowel.[3] If the vowel-glide analysis were adopted, the examples of (2d) would terminate with three-member consonant clusters

[2] T should be understood as an obstruent (or the less sonorous member of a clusters), while R as a sonorant (or the more sonorous one).

[3] Bangor Welsh allows instances of clusters of rising sonority to occupy the final syllable. Fynes-Clinton (1913) lists examples of this type [r̥ʰiːskl] *rhisgl*, ‘bark of trees,’ [gəivr] *geifr*, ‘goat.pl,’ [pɑvl] *palf*, ‘paw,’ [pɑrɑbl] *parabl*, ‘speech,’ [ovn] *ofn*, ‘fear,’ [kodl] *codl*, ‘nonsense,’ [kenedl] *cenedl*, ‘nation.’ *Rhisgl* would be the only three-member consonant cluster in the word-final position. However, it has to be remembered that sTR behave in an unusual way in many languages of the world.

each. Further, clusters of (2f) would gain one extra member which would result in maintaining up to four consonants in a cluster (e.g., *heilltion* [ˈhəjɬtjon]). Hence, glides cannot be assumed to contribute to the composition of diphthongs, for this would violate phonotactic restrictions observed outside of the diphthong context.

Another problem with accepting the vowel-glide approach is that Welsh has diphthongs whose second member is the high central vowel [ɨ]. Thus, all the diphthongs closing towards this vowel are said to be closing towards [ɟ] in this analysis. However tempting it is, this enriches the consonant inventory by one glide whose distribution is that of the second part of a diphthong. It must be preceded by a vowel and the number of vowels it might follow is restricted to the following: [ɑ, o, u, ə]. None of the remaining Welsh consonants are that much restricted concerning their positional and melody-related distribution.

It must be concluded that, although the vowel-glide approach to Welsh diphthongs carries some explanatory potential as for the positional factors of diphthongs (the place of a syllable within a word), it is not substantiated phonetically, violates phonotactic restrictions and introduces questionable segments into the inventory of the Welsh consonants.

5. The inventory of the North Welsh diphthongs

There are three series of closing diphthongs in the northern variety and only two in the southern dialect of the Welsh language (Ball and Williams 2001, 44–45). This discrepancy is due to the presence of the high central vowel [ɨ] in the former and its absence from the latter.

The first series contains four diphthongs closing towards the rounded vowel [u]. The second series closes towards the vowel [i]. The additional third series closes towards the aforementioned high central vowel, which is typical of the northern variety of the language. Interestingly, there are two diphthongs whose first member is the vowel [ɑ]. The difference between [ɑɨ] and [ɑːɨ] is primarily of quantity of the first member (see Jones 1984, 61, Ball and Williams 2001, 157), therefore the length within a diphthong will be phonologically important only for this pair (Fynes-Clinton 1913):

(3)	a.	[iu]	[ɬiu]	*lliw*	‘colour’
		[eu]	[teːu]	*tew*	‘thick’
		[ɑu]	[glɑːu]	*glaw*	‘rain’
		[ɨu]	[gloɨu]	*gloyw*	‘bright’
		[əu]	[dəunʃo]	*dawnsio*	‘to dance’

b.	[ɑi]	[gwɑir]	*gwair*	‘hay’
	[oi]	[gloivi]	*gloywi*	‘to polish’
	[əi]	[gnəid]	*gwneud*	‘to do’
c.	[ɑɨ]	[hɑɨl]	*haul*	‘sun’
	[ɑːɨ]	[hɑːil]	*hael*	‘generous’
	[oɨ]	[hoɨl]	*hoel*	‘hat-peg’
	[uɨ]	[guːið]	*gŵydd*	‘goose’
	[əɨ]	[əɨog]	*euog*	‘guilty’

As observed by Jones (1984, 57–61) and Awbery (1984, 93–95), diphthongs are sensitive to their position within a word and their distributional properties are different. First, the diphthongs with [ə] as the first member are banned from the final position. This might be connected with the prosodic strength of the final syllable in Welsh and the peculiar status of schwa in this position (which is often recalled in the case of Vowel Mutation, see for instance Bosch 1996; Buczek 1998). Second, the diphthong [oi] is rarely present in final stressed syllables. Third, [ɑi] is confined to monosyllables and final stressed syllables but is often monophthongised if the final syllable is unstressed.

Although these distributional properties of particular diphthongs are true, there are exceptions to almost every pattern, which is indicative of historical accidence rather than contemporary phonological setting of the Welsh language, regulating the distribution of diphthongs. First, there are [ə]-initial diphthongs in monosyllabic words (often borrowings) in (4a). Second, instances of final (yet stressed) [oi] are easily found (4b). Third, true [ɑi]>[ɑ] alternations are found word-medially, not finally (4c). The examples below are collected from Fynes-Clinton (1913):

(4) a.	[grəund]	*growd*	‘crowd’
	[kəurt]	*cwrt*	‘yard’
	[łəiɬ]	*lleill*	‘other.pl’
	[fəind]	*ffein*	‘fine’
	[gəivr]	*geifr*	‘goat.pl’
b.	[kloi]	*cloi*	‘to lock’
	[kəˈfroi]	*cyffroi*	‘to agitate’
c.	[gwrɑig]	*gwraig*	‘wife’
	[gwrɑgoð]	*gwragedd*	‘wife.pl’
	[kɑiŋk]	*cainc*	‘main branch’
	[kɑŋɑn]	*cangen*	‘a small branch’

It can be concluded that North Welsh, of which the Bangor variety is a representative, has indeed thirteen diphthongal phonemes. The following sections will provide an analysis couched in the CVCV theory, whose main goals will be to propose two separate syllabic structures for long vowels and for diphthongs, and to incorporate the melodic constraints of the vocalic members into the diphthongal structure.

6. Syllabic structure in the Lateral Theory of Phonology (LTP/CVCV)

LTP (Lowenstamm 1996; Ségéral and Scheer 1999 and 2008; Szigetvári 1999; Scheer 2004 and 2012; Scheer and Szigetvári 2005; and Scheer and Ziková 2010) is a development of Government Phonology (Kaye, Lowenstamm and Vergnaud 1985 and 1990; Charette 1991; Harris 1994; Cyran 1997; Bloch-Rozmej 2008 among others), whereby all phonological strings are made of strictly alternating Onsets and Nuclei. Moreover, a Nucleus may remain empty (phonetically uninterpreted, i.e., silent) if it is Properly Governed by a laterally active Nucleus to its right, locked between two Onsets contracting Infrasegmental Government (IG), or (parametrically) domain final. The structures below represent two consonant clusters and two vocalic sequences:

(5) a. C_1 v_1 C_2 V_2 b. C_1 v_1 C_2 V_2

T ← R R T α

c. C_1 V_1 C_2 V_2 d. C_1 V_1 C_2 V_2

β α β

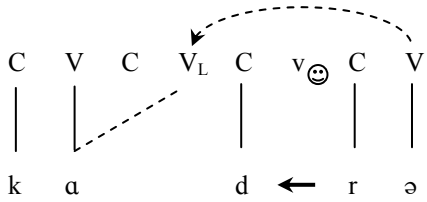
The diagram (5a) contains a branching onset – a rising sonority cluster whose members contract an IG relation (marked with the leftward arrow), hence the lowercase Nucleus v_1 remains empty. The emptiness of the Nucleus v_1 in (5b) is secured by the following Nucleus V_2 which is endowed with melody α and can properly govern (silence) its predecessor. If the same melodic content is attached to two Nuclear slots (5c), the structure represents a long vowel but if two Nuclei host two different melodies (5d), it is a structure of a diphthong.

The Lateral Theory of Phonology acquired its name from the lateral relations between constituents or their lateral actorship. A Nucleus can discharge Licensing, i.e., a lateral force securing the melodic strength (complexity) of the segment it licenses but it can also discharge Government which spoils the melodic strength of the governee by reducing its complexity. Any further discussion of the workings of lateral forces in CVCV would take us much beyond the scope of the present chapter. Suffice it to say that this dichotomy lies at the heart of the Coda Mirror theory (Ségéral and Scheer 1999; 2008; as well as Scheer and Ziková 2010) and finds empirical evidence in both synchronic and diachronic processes in various genetically unrelated systems.

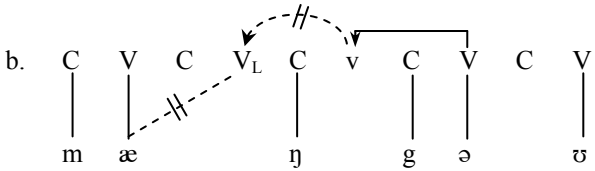
7. Empirical predictions of headedness of nuclear structures

Scheer (2004, 257) assumes that long vowels in languages like English must be licensed. Since only full nuclei (including the Final Empty Nucleus parametrically silent) are lateral actors, vowels cannot be long before RT clusters (c.f. 5b) where the nucleus, straddled by the two onsets, is governed and is not a lateral actor. Thus, a vowel that needs to be licensed cannot appear before RT clusters in languages like English. Let us consider two English examples – a vowel before a TR (*cadre*) and an RT ('mango') cluster:

(6) a.



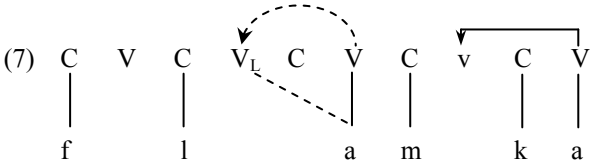
b.



The two onsets [d] and [r] enter into a governing relation, therefore the nucleus [ə] is able to license the nucleus V_L which accommodates the vocalic melody and creates a long vowel [ɑː] in the word *cadre* (6a). The

situation is different in (6b) where the onsets [ŋ] and [g] cannot contract a governing relation, hence the lowercase nucleus has to be taken care of by Proper Government, which strips it off its governing abilities. Laterally inactive, the lowercase nucleus cannot license V_L and the vowel [æ] remains short in *mango*.

In Czech, on the other hand, what follows a long vowel fails to prevent it from maintaining its length. It is so due to the fact that the vowels are right headed and need no further licensing (Scheer 2004, 168). The word *vlámka* 'Flemish woman' illustrates this situation:



The right-headed (or left-branching) vowel has its melody lexically lodged in a licensor nucleus and it spreads to the nucleus V_L to its left. Hence, the spread melody receives licensing but does not require it from any other vowel except the one hosting the melody to be spread.

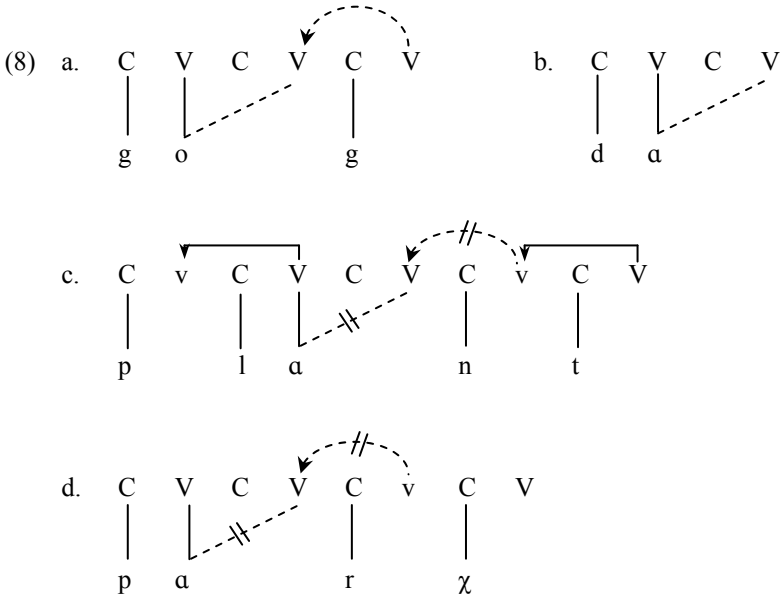
The headedness of nuclear structures is not merely a theory-internal representation of vocalic melody spreading but it carries certain syntagmatic implications, namely left-headed (right-branching) vowels will always depend on what follows and are likely to be found before single consonants or a limited number of clusters (mostly of the s+C and coronal RT type).[4] Conversely, a right-headed (left-branching) vowel is independent of the following structure and will be allowed before various consonant clusters.

8. Headedness of Welsh vocalic expressions

Section 3 aimed at presenting the syntagmatic differences between long vowels and diphthongs in the Bangor variety of the Welsh language, while the theoretical assumptions laid out in sections 6 and 7 allow us to propose structural representations for the two disparate vocalic expressions. Bearing in mind that Welsh long vowels are restricted to the stressed

[4] See Harris's (1994, 76–77) analysis of the restrictiveness of the occurrence of Super Heavy Rhymes in English.

syllable and never occur before clusters, we can put forward a left-headed structure:



Long vowels are possible in words *côg* and *da* represented as (8a) and (8b) respectively due to their being licensed by the following nucleus. In (8a) it is the Final Empty Nucleus that licenses the preceding vowel, while in (8b) the vowel spreads to the FEN position which is already licensed by parameter. The vowels in (8c) and (8d) in words *plant* and *parch* must remain short for the following Nucleus is governed and cannot dispense licensing required to maintain length.

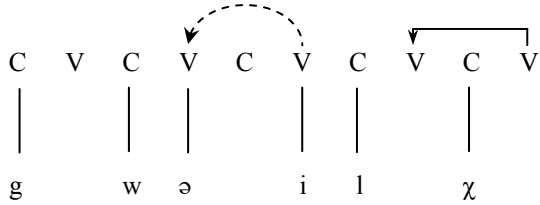
A word of comment is in place here. First, an observant reader will have noticed that the cluster [pl] is not an IG relation but it encloses an empty nucleus that is properly governed.[5] A similar idea concerning the representation of word-medial clusters of rising sonority is entertained by Czerniak (2014) and will not be discussed here any further. Second, the

[5] The term 'Proper Government' is dispensed with in favour of 'Government' in LTP. However, not to introduce confusion between two types of Government which will be discussed in this chapter (Proper and Infrasegmental) the Standard Government Phonology nomenclature will be retained.

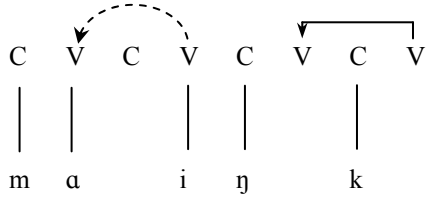
analysis of vowel length before s+C clusters (1c) will also be regarded superfluous to the present study.

As for the representation of diphthongs, their immunity from the contextual influence appears to indicate a right-headed structure as depicted below:

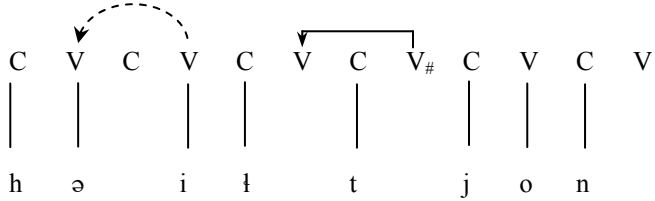
(9) a.



b.



c.



The diphthongs in (9a) and (9b) in words *gweilch* and *mainc* are followed by RT clusters, which means they cannot be licensed by a properly governed nucleus. Furthermore, the diphthong in the word *heilltion* (9c) is followed by three consonants. Although the three-consonantal group looks like a RøTR cluster, it is a RøTøR one, i.e., there are no IG relations. The silence of the Nuclei is kept by Proper Government and language-specific parameter – the Nucleus $V_{\#}$ is in fact a domain final Nucleus which is capable of silencing the preceding one for it is not properly governed itself.

Thus, right-headedness of Welsh diphthongs explains why, unlike long vowels, they are free to occur in every position within the word.

Nonetheless, there are also melodic aspects of these structures that might indicate their right-headedness.

9. Melodic restrictions and interactions

Element Theory (Kaye, Lowenstamm and Vergnaud 1985; Harris and Lindsey 1995; Cyran 1997; Bloch-Rozmej 2008; Backley 2011), which is the core of melodic representation in Government Phonology, recognises monovalent primes which contribute to the phonetic interpretation of a segment only when present and their interpretation is, to a large extent, language specific. An element can receive either a head or an operator status which determines the degree of its contribution.[6] There are three resonance elements (I), (U) and (A), corresponding to three corner vowels [i], [u] and [a], respectively. Other vowels are combinations of the resonance primes with equal or unequal status. For instance, if a language has two vowels [e] and [ɛ], they are likely to be made of compounds (I, A) and (I, A), respectively. The underlined element (I) in the first vowel contributes more height, while the head (A) in the second vowel is interpreted as a greater degree of openness. Having said that, we might propose the elemental make-up for the diphthongs listed in (3):

(10)

iu		**eu**		**ɑu**		**ɨu**		**əu**	
I	U	I A	U	A	U	I	U	A	U

ɑɨ		**oɨ**		**uɨ**		**əɨ**	
A	I	U A	I	U	I	A	I

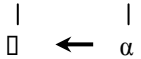
ɑi		**oi**		**əi**	
A	I	U A	I	A	I

[6] It has to be remembered that Bloch-Rozmej (2008, 185) proposes a three-way distinction between prime status: head, operator and dependent.

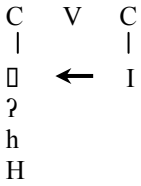
As can be seen, Welsh vowels are mostly headed by the element (I) or (U), the element (A) is headed in the vowel [ɑ] and headless in [e], [o] and [ə][7]. The high central vowel [ɨ] is made of the element (I) in the operator status. Furthermore, all but three diphthongs are of even complexity, i.e., the first and the second member are made of the same number of elements (in this case one). What is important, no two members of a diphthong share a single element. It will be proposed here that Welsh diphthongs enter the right-headed relation also on the melodic level. Specifically, it will be maintained that Infrasegmental Government is not monopolised by Onsets.[8]

Infrasegmental Government was devised to account for a relation between two constituents that would be conditioned melodically (Scheer 2004, 64). The melodic requirement is that the governor (on the right) posses a prime that is absent from the governee (on the left). Thus, the right-hand side constituent can govern the empty slot in the left-hand side governee:

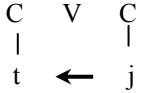
(11) a.



b.



c.



[7] See also Czerniak (2015) for an elementary representation of the Welsh schwa including the element (I). Such a representation would severely handicap the present analysis, but this possibility will not be discussed here due to space limitations.

[8] These representations may be found inaccurate, since Scheer (2004) assumes that (U) and (I) reside on one autosegmental line and roundness is represented by the prime (B). However, no principles of consonant interaction in CVCV have been violated here and the representations can be safely used for the sake of exposition and argument.