References

Balogné Bérces, Katalin (2001) 'Ambisyllabicity' across word boundaries: A Strict CV Phonology approach. In: DOXIMP 6. Selected Papers. Budapest: Elméleti CV Phonology Program (ELTE), MTA Nyelvtudományi Intézet: 1-8. (Also appeared in: SOAS Working Papers in Linguistics 11: 47-55.)

Chomsky, Noam and Morris Halle (1968) The Sound Pattern of English. New York: Harper and Row.

Dienes, Péter (2000) VC Phonology: a theory of consonant lenition and phonotactics. MA thesis, ELTE, Budapest. (http://budling.nytud.hu/~dienes/VC.ps.gz)

Dienes, Péter and Péter Szigetvári (1999) Repartitioning the skeleton: VC Phonology. Ms., ELTE. (http://budling.nytud.hu/~szigetva/papers.html#vc_0)

Goldsmith, John (1976) Autosegmental Phonology. Doctoral dissertation, MIT. (New York: Garland Press, 1979.)

Inkelas, Sharon (1989) Prosodic Constituency in the Lexicon. Doctoral dissertation, Stanford University. (New York: Garland Press, 1990.)

Inkelas, Sharon and Draga Zec (1995) Syntax-phonology interface. In: John Goldsmith (ed.) The Handbook of Phonological Theory. Cambridge, Mass. & Oxford: Blackwell. 535-549.

Jensen, John T. (2000) Against ambisyllabicity. Phonology 17.2: 187-235.

Kahn, Daniel (1976) Syllable-Based Generalisations in English Phonology. Doctoral dissertation, MIT, Cambridge, Mass.

Kaisse, Ellen M. (1985) Connected Speech: The Interaction of Syntax and Phonology. Orlando, Fla.: Academic Press Inc.

Kiparsky, Paul (1979) Metrical structure assignment is cyclic. Linguistic Inquiry 10: 421-442.

Lowenstamm, Jean (1996) CV as the only syllable type. In: Jacques Durand and Bernard Laks (eds.) Current Trends in Phonology: Models and Methods. European Studies Research Institute, University of Salford Publications. 419-442.

Lowenstamm, Jean (1999) The beginning of the word. In: John Rennison and Klaus Kühnhammer (1999) Phonologica 1996. Syllables!? The Hague: Holland Academic Graphics.

Nespor, Marina and Irene Vogel (1986) Prosodic Phonology. Dordrecht: Foris.

Scheer, Tobias (1996) Une théorie de l'interaction directe entre consonnes. Doctoral dissertation, Université Paris 7.

Ségéral, Philippe and Tobias Scheer (1999) The Coda Mirror. Ms., Université de Paris 7 & Université de Nice. (http://www6.50megs.com/phono/TheCodaMirror.pdf)

Selkirk, Elisabeth (1986) On derived domains in sentence phonology. Phonology 3: 371-405.

Szigetvári, Péter (1999) VC Phonology: a theory of consonant lenition and phonotactics. Doctoral dissertation, MTA/ELTE, Budapest. (http://budling.nytud.hu/~szigetva/papers.html#diss)

Withgott, Mary Margaret (1982) Segmental Evidence for Phonological Constituents. Doctoral dissertation, University of Texas, Austin.

Zec, Draga (1988) Sonority Constraints on Prosodic Structure. Doctoral dissertation, Stanford University.

Licence to properly govern[*]
Csaba Csides
csides@ludens.elte.hu

1   Introduction

This paper addresses the issue of why there is no consonant lenition word-initially in English and possibly in a host of other languages.[1] This task will be carried out through a case study of the distribution of flapped versus aspirated *t* in General American (GA). The present study concentrates purely on the absence of lenition: for more extensive discussions of consonantal weakening the reader is referred to Harris (1990, 1992, 1994, 1997) Ségéral & Scheer (1999), Scheer (in prep.) Dienes & Szigetvári (1999), Szigetvári (1999), Dienes (2000), Csides (2000). Furthermore, I will only concentrate on structural aspects here: for discussions of melody in weak contexts see the works cited above. For an extensive discussion of the typology of weakening and strengthening processes of obstruents cf. Cser (2001).

      Section 2 sketches some basic outlines of the theoretical framework I will be assuming with special emphasis on structural relations contracted by different positions. Section 3 examines the beginning of the word and discusses Balogné (2002) comparing it to our findings in section 2. Section 4 tackles the relevant data while section 5 is devoted to the conclusions.

2   Structural relations in CV[2]

2.1   A historical interlude

In the early versions of standard government phonology the notion of government and licensing were not clearly separated and defined. Harris (1990, 1992, 1994) represents the first attempt at a clear definition of government versus licensing by tacitly assuming that government is a stricter form of licensing in the sense that government goes along with phonotactic dependencies. In Licensing Inheritance (1997), Harris presents what he calls an integrated theory of neutralization phenomena the basic tenet of which is formulated as follows.

     (1) Licensing Inheritance (Harris 1997)
     A licensed position inherits its a-licensing potential from its licensor.

Licensing is viewed in this framework as a kind of glue that keeps together the different constituents in the prosodic hierarchy and supplies skeletal positions with differing degrees of licensing potential. Prosodic heads enjoy a greater degree of melodic licensing potential than non-heads. Harris (1997:317) claims that 'having non-head status at some level of prosodic structure compromises a position's ability to

---

[*] The research reported here was supported by the Hungarian State Eötvös Fellowship. The title of this paper might sound like a plagiarism to many, especially, when one compares this title to that of Charette (1990, 1991: chapter 5). Note that this has been a deliberate choice in order to call the reader's attention to the fact that this is not a new concept but rather the extension of an already existing principle. I express my greatest debt of gratitude to Monik Charette, who (as always) gave me all her support and help.

[1] It is a cross linguistic fact that the word-initial site is less likely to give rise to consonant lenition.

[2] This section is a modified version of section 4 of Csides (2000).

license melodic material'. For checking the exact details of this proposal the reader is invited to consult Harris (1997:338-341).

Licensing has two fundamental roles in this classic GP framework. On the one hand, it legalizes the existence of all skeletal positions but the ultimate head of the domain (referred to as the designated terminal element in Metrical Phonology (MP), e.g., Hogg & McCully (1987:70)). On the other hand, its depleting capacity is held responsible for a position's reduced capability of maintaining melodic contrasts. As a result licensing has access to both skeletal and melodic properties of phonological strings, hence the terms prosodic licensing (p-licensing) versus autosegmental licensing (a-licensing).

The greatest objection usually levelled at Licensing Inheritance is that it is unable to predict different types of lenition phenomena, i.e., that it cannot specify why vocalisation and spirantisation tend to occur in certain positions while debuccalization in others. Ségéral & Scheer (1999) present a theory of lenition building on the insight of Lowenstamm (1996). They set out to identify the phonological strong position where diachronic sound decomposition is claimed to be rare. They identify this position as shown in (2).

(2)

$$\left\{ \begin{array}{c} C \\ \parallel \end{array} \right\} ---$$
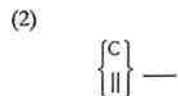
The label tacked to the configuration in (2) is **Coda Mirror** supposedly because it is the complementary conjunction to the configuration traditionally[3] used to describe coda-like behaviour. However, it has long been established that the mirror context of (2) cannot be labelled coda since pre-consonantal consonants are not necessarily codas[4] and word final consonants behave as onsets rather than codas, cf. Kaye (1990), Harris & Gussmann (1998). Furthermore, Coda Mirror does not have anything to say about V_V intervocalic lenition sites since this position can be defined only in terms of a domain larger than a syllabic constituent and the theory of Ségéral & Scheer confines its attention to the CV skeleton.

The main achievement of Ségéral & Scheer (1999) was to identify two different (antagonistic) forces that drive or inhibit lenition: government and licensing. Government is seen in their framework as a destructive power that reduces a position's capacity of maintaining melodic content. Licensing is the opposite force: it reinforces segmental expression in the sense that licensed positions are better at holding their melodic content. Both forces are claimed to be right-to-left and it is vocalic positions that license and govern in this framework. Consider the representations in (3).[5]

(3)

a.   V   C ⇐ V   b.   V   C ⇐ V
      | | | | |
      α   β   α   β   γ

---

[3] By the term *traditionally* here I mean pre-government and pre-prosodic tradition such as Chomsky & Halle (1968) or Wells (1982).

[4] Witness the case of bogus clusters, e.g., Harris (1994)

[5] Single arrows indicate government double arrows indicate licensing.

In (3a) the initial vocalic position is empty hence governable, while the initial vocalic position in (3b) is full hence it rejects government. In the latter case, government originating in the second vocalic position hits the intervening consonantal position since it cannot land on a vocalic position having melodic material[6]. This proposal is called proper government in GP, and the idea tacitly assumes that full vocalic positions are inherently justified in phonological strings whereas empty ones have to be justified by a structural relation of some sort. A further stipulation of the model is that unpronounced vocalic positions neither license nor govern. Szigetvári (1999:51) notes that strong consonantal positions in this framework are licensed and ungoverned while weak consonantal positions are either unlicensed or governed. All traditional codas will thus be unlicensed in this framework since they are followed by an empty vocalic position, which is incapable of licensing. Furthermore, consonants end up ungoverned if preceded or followed by an empty vocalic position. In the former case because government hits the preceding empty vocalic position, in the latter case because the following empty vocalic position is incapable of governing, i.e., is inert. Disregarding branching onsets, strong positions are identified as (4).

(4)   a. onset preceded by a coda
       b. second consonant in a bogus cluster
       c. word-initial onset

For (4c) a word-initial empty cv[7] pair has to be posited (whose vocalic part will absorb government emanating from a following active vocalic position), which will act as a boundary marker[8]. Witness that one configuration is logically impossible and is in fact non-existent in this framework. A consonantal position cannot be unlicensed and governed simultaneously. This is because for it to be governed it has to be followed by an active vocalic position but once a consonantal position is followed by an active vocalic position, this active vocalic position always licenses the preceding consonantal position. For a detailed comparison of Licensing Inheritance and Coda Mirror the reader is referred to Szigetvári (1999).

The main thrust of Ségéral & Scheer (1999) is the observation that it is the same force that governs both an empty vocalic position in a vCV string (where lower case 'v' denotes an empty vocalic position) and a consonantal position in a VCV string. This is an insight that any theory of lenition should capitalise on.

However, Coda Mirror fails to relate stress and segmental weakening; since the model dispenses with prosodic structure. As a result, it is unable to make reference to higher order prosodic domains, such as the foot. As a consequence, it predicts lenition in foot-initial onset head position, where consonant lenition is considerably rarer. Clearly, the fact that consonants in foot-initial position are less likely to lenite must then be expressed by a language specific constraint, or a parameter.[9] Szigetvári

---

[6] Note the striking difference between proper government and metrical government to be introduced later. The target of the former is an empty vocalic position while the target of the latter is a contentful vocalic position.

[7] Henceforth, I adopt the convention of indicating empty positions by lower case letters. This practice was introduced by Dienes & Szigetvári (1999) and has been widely used ever since. This type of notation is equivalent to using upper case symbols with no melody attached to them but lower case symbols are more transparent visually.

[8] These boundary markers allegedly replace traditional morphological boundary markers.

[9] Szigetvári (1999) introduces the Antipenetration Constraint to account for the lack of pretonic syncope and absence of word initial lenition in English. A critical appraisal of this constraint is to be found in Csides (2000).

(1999:79) goes for this option by introducing what he calls the Antipenetration Constraint repeated as (5) below.

(5) The Antipenetration Constraint
Government cannot penetrate a stress domain.

The constraint in (5) is proposed to exclude pretonic lenition and pretonic syncope and ultimately expresses the generalisation that stressed and unstressed vowels behave differently in the phonological string. Since Szigetvári repartitions the skeleton into VC units, it is the stressed vocalic position that initiates a stress domain and not the consonantal position(s) preceding the stressed vocalic position belonging to the same 'syllable'. The status of this constraint will be discussed further in section 2.2.

Dienes & Szigetvári (1999:5) take the observation of Ségéral & Scheer to its logical conclusion and claim that consonantal positions host segments with consonantal properties, vocalic positions those with vocalic properties, thereby encoding the traditional notion of maximal sonority distance directly in the skeleton. Furthermore, they claim (1999:6) that the 'host of a segment also partly determines its melodic interpretation.' Szigetvári (1999:56) argues that the interpretations in (6) should be attributed to vocalicness vs. consonantalness.

(6) Vocalicness is loud: V slots of the skeleton aim at being pronounced.
Consonantalness is mute or silent: if nothing intervenes a C position will remain silent.

According to Szigetvári (ibid) 'C positions are not normally left silent because the lexical association of melodic material to a C position means external influence, which normally overrides the slot's inherent affinity to silence.' Szigetvári (1999) also introduces a new definition of government roughly as follows:

(7) Government spoils the inherent properties of its target. A governed C position loses its inherent muteness, it loses its stricture properties and becomes louder, that is more vowellike, more sonorous, it undergoes vocalic lenition, whilst a governed V position loses its inherent loudness and becomes silent.[10]

Furthermore, Szigetvári (1999:65) argues that 'it is an inherent property of vocalic positions to govern and license unless they suffer some unfavourable external influence.' Government is said to be external influence and thus governed vocalic positions fail to govern or license, they become inert. Clearly, from at least an aesthetic point of view, restricting governing and licensing capacity to vocalic positions is a desirable step to take since vocalic positions are prosodically more prominent. However, Szigetvári (1999:68) introduces the notion of C-to-C government, cf. (8), for coda-onset clusters (cc clusters when abbreviated)[11] in order to account for the phonotactic dependencies holding between these two positions. C-to-C government will then distinguish genuine coda-onset clusters from bogus

---

[10] We will later make a distinction between relative silence and absolute silence.

[11] Szigetvári (1999) uses the term coda-cluster instead of coda-onset cluster because he uses the latter term for a coda followed by an onset cluster. I, however, retain the term coda-onset cluster for heterosyllabic CC sequences displaying phonotactic dependencies but will abbreviate them as cc clusters.

clusters: in the latter case no such C-to-C communication will be postulated.

(8)

The lower case v in (8) – as usual – stands for an empty vocalic position. The arrow running under the enclosed vocalic position illustrates the direction and the target of government as before, and is said to create a burial domain. Buried and governed vocalic positions are jointly referred to as DEAD vocalic positions whereas those that are neither buried nor governed are said to be alive or active. C-to-C government may only take effect over an intervening empty vocalic position. Furthermore, C-to-C government has melodic restrictions and is claimed to be language specific. Dienes & Szigetvári (1999) claim that the definitions of government and licensing provided in Coda Mirror Plus (cf. 7 above) make the following predictions.

(9)(i) Vocalic lenition is manifest in governed C positions: types of vocalic lenition are the following:
(a) sonorization, i.e., loss of inherent consonantalness (voicing)
(b) spirantization, i.e., loss of stricture properties

(ii) Consonantal lenition is manifest in unlicensed C positions: unlicensed consonants lose melodic elements, they lose place of articulation.

2.1   Word-internal heterosyllabic CC clusters[12]

Csides (2000) considers the status of genuine coda-onset clusters and comes to the conclusion that an empty vocalic position enclosed within a genuine coda-onset cluster remains ungoverned but becomes buried. The difference between governed and buried empty vocalic positions will be manifest in their differing licensing capacity. To be more precise we assume that governed empty vocalic positions lose while buried empty vocalic retain their licensing capacity. As a consequence of this step, cc1 positions are targeted by the licence emanating from the enclosed empty vocalic position[13] and by government by cc2, due to C-to-C government, cf. (10) below. Notice that a cc1 position within a coda-onset cluster is a governee and not a governor: only governors need licence to govern.[14] A bc1 position will thus be identified in line with Dienes & Szigetvári (1999), Szigetvári (1999) and Dienes (2000) as a position which is unlicensed and ungoverned. This is because the enclosed empty vocalic position within a bogus cluster is not buried by C-to-C government, which would create a closed domain immune to outside government. As a consequence, the enclosed empty vocalic position inside a CvC bogus cluster is governed by a following active vocalic position. Consider now the two representations in (10) below.

---

[12] The status of tautosyllabic CC clusters will not be discussed here as that would take us far beyond the scope of the present paper.

[13] This proposal will be further refined as the argumentation unfolds.

[14] The idea is due to Charette and its formulation is given as (13) below.

(10)   Coda-onset cluster   Bogus cluster
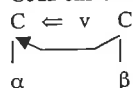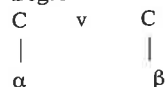
Now, we need a reason for preventing a following live V position in a CvCV string from governing into a coda-onset cluster and thus leaving the licensing potential of the enclosed empty vocalic position intact: In Szigetvári (1999) nothing (except for the antipenetration constraint)[15] prevents an empty v-position from being governed by a following live vocalic position. Let us propose a constraint on proper government reminiscent of Scheer's (1998) closed domain.[16]

(11) Phonotactic Islands
C-to-C governing domains form phonotactic islands yielding a shell against government emanating from an outside vocalic position.

Let us explore the consequences of (11). In Dienes & Szigetvári (1999) both governed and buried empty vocalic positions (ones enclosed within a C-to-C governing domain) were considered to be dead in the sense of being unable to govern or license. Csides (2000) modifies this proposal as follows.

(12) The empty vocalic position hypothesis (EVPH)
Empty vocalic positions are either governed or buried within a governing domain. Governed empty vocalic positions are unable to license or govern: they are inert. Buried empty vocalic positions are able to license but are unable to govern.

Observe that the lack of V-to-V government in a $C_1 v C_2 V$ string (where $C_1 v C_2$ forms a coda-onset cluster) does not jeopardize the integrity of the skeleton: the live vocalic will still license C_2, providing the necessary glue that helps maintain the link between skeletal positions.[17]

Compare the two types of cluster in (10) again and witness that the EVPH in (12) claims that empty vocalic positions are able to license: this, however, takes place only under special circumstances, namely, when they have a role to play, i.e., a task to perform. This task will be identified as Charette's (1990:242) government licensing: i.e., that non-vocalic positions need licence to be able to govern. Her proposal is given in (13) below.

(13) Government-licensing
'For a governing relation to hold between a non-nuclear head A and its complement B, A must be licensed to govern by its nucleus at the licenser projection level.'

Reduced to a CV skeleton this means that a governing consonantal position must receive licence from a following vocalic position to be able to govern. Therefore, non-

---

[15] The nature of this constraint will be discussed in section 2.2.
[16] Scheer (1998) proposes the closed domain analysis for onset clusters.
[17] In fact, I do not assume that licensing should keep the skeletal positions together. On this cf. Csides (2000).

licensing empty vocalic positions cannot follow a C-to-C coda-onset governing domain. Notice that the licensor projection level in the case of a strict CV framework will be the skeleton itself. The above-mentioned arguments suggest that C_2 positions in coda-onset clusters will be defended against lenition. Adopting this proposal means that in our framework an empty vocalic position enclosed within a C-to-C governing domain will be able to license but only those consonants that have governing responsibilities.

The inherent licensing capacity of vocalic positions is suspended only under very restricted circumstances: only languages having bogus-clusters necessarily resort to this option. Structurally speaking, these languages will be the most marked of all in this respect. This observation is formulated as (14).

(14) The prosodic excellence of vocalic positions
The prosodic excellence of vocalic positions is reflected by their inherent licensing capacity.

Consider the representation of coda-onset clusters in (15) once again.

(15)   Coda-onset cluster[18]
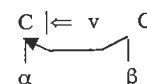
The enclosed empty vocalic position is buried by being landlocked within a C-to-C governing domain. As proposed above, buried empty vocalic positions retain their licensing capacity and they use it for specific purposes: to license non-vocalic governors. In the case of coda-onset clusters, however, the first consonantal position is the governee and not the governor, and as such, it does not require the licence emanating from the buried empty vocalic position: in fact, it rejects it. In other words, the first consonantal position in a CvC coda-onset cluster is legalised in the string, as it were, by being governed. However, being governed a position immediately rejects government-licence emanating from a buried empty v-position. This then leads to the conclusion that buried empty vocalic positions have a role entirely distinct from that of full vocalic positions.

(16) Buried v-positions
Buried vocalic positions lend governing licence to non-vocalic governors.[19]

We are now in a position to identify the tasks different vocalic positions carry out.

(17) The role of vocalic positions.
(a) full vocalic positions license and govern
(b) buried vocalic positions grant government licence
(c) governed empty vocalic positions neither license nor govern

---

[18] The vertical line appearing before the double arrow indicates rejected licence.
[19] We shall later propose that C-to-C government in onset-clusters goes from left-to right, like in standard GP.

2.2   VCV sequences

It is by now a phonological commonplace that foot-internal intervocalic positions are much more favoured lenition sites than foot-initial ones in the majority of natural languages including English.[20] In order to capture this generalisation Szigetvári (1999:79) introduces the Antipenetration Constraint, as given below.

(18) The Antipenetration Constraint
     Government cannot penetrate a stress domain.

Notice that for Szigetvári a stress domain begins with a stressed vowel and extends up to the next stressed vowel, where stressed vowels also include tertiary stresses. The constraint is essentially designed to account for the lack of pretonic syncope and the absence foot-initial lenition in English and precludes stressed vowels from governing right-to-left into a preceding stress-domain. Since all types of government are right-to-left in Szigetvári (1999), we could just as well claim that stressed vowels are unable to govern.

Alternatively, Csides (2000) claims that stressed vocalic positions are just as good governors as their unstressed relatives, in as much as they spend their governing potential on other vocalic positions. These vocalic positions will then be identified as unstressed vocalic positions to their right within the stress-domain, call it the foot. This proposal suggests that unlike licensing, government cannot be made unidirectional. Notice that this move is entirely in line with Szigetvári's interpretation of government: government spoils the inherent properties of a given position. Within the foot then left-to-right government by a stressed vocalic position would relatively impair the inherent loudness of its unstressed peer(s), the phonetic manifestation of which is vowel reduction.[21]

The above-mentioned arguments lead one to the conclusion that the function of stressed and unstressed vowels with respect to V-to-V government is entirely distinct. Stressed vowels govern their unstressed peers (left-to-right) within the foot and silence their vocalic neighbours relatively (reduction).[22] Unstressed vowels govern (right-to-left) and thus grant legitimacy to their empty relatives (absolute silence), which is the total spoiling of the inherent properties of a position: only these vocalic positions may lack any melody whatsoever. In the case of V-to-C government unstressed vowels will govern preceding full or empty consonantal positions and make them more vowellike, i.e., they will spoil their inherent muteness (spirantisation, voicing, hiatus filling, smooth vocalic transition between the two parties of a diphthong or a long vowel). This was argued to be possible since unstressed vowels are afflicted by government from their stressed peers and as such lose some of their inherent vocalicness (loudness) and pass it on to a preceding full consonantal position under government. These observations lead us to the generalisation in (19) below.

---

[20] This does not entail that there are no examples of foot-initial lenition, cf. Grimm's Law in e.g., Lass (1994:20).

[21] Harris (1992, 1997) assumes that there is a licensing relation between the head of the foot and its unstressed dependents. In the framework of licensing inheritance the decreasing amount of licensing charge is made responsible for the reduced a-licensing potential of a given position. In the framework presented here government and licensing are defined rather differently, víz., as two opposing forces, see above. As a result destressing and vowel reduction will be driven by government here.

[22] This type of government (i.e., the one obtaining between the stressed and the unstressed vowel within the foot) may be referred to as metrical government.

(19) The governing function of stressed vs. unstressed vowels.

Stressed and unstressed vowels have complementary governing potential. Stressed vowels govern only left-to right: they govern their non-empty peers within trochaic feet silencing them relatively (reduction).

Unstressed vowels govern only right-to-left. They govern empty vocalic positions keeping them silent (syncope), full (non-empty) consonantal positions (foot-internal intervocalic lenition), and empty consonantal positions buried inside a long vowel or a diphthong. Ungoverned empty consonantal positions remain silent, ungoverned empty vocalic positions must be buried or pronounced.

Notice that by adopting (19) the effects of the Antipenetration Constraint are derived from the complementary governing function of stressed and unstressed vocalic positions respectively. Consider the representations in (20) below.

(20) a. foot-internal V-to-C government   b. foot-internal V-to-V government

2.3   Long vowels and diphthongs

The representation of long vowels and diphthongs proposed by Csides (2000)[23] highlights a special property of vocalic clusters in CV phonology: The representations attributed to these structural relations parallel the structure of a binary trochaic foot. The only difference between a binary foot and a long vowel is that the intervening consonantal position is empty in the latter case but is full in the former.[24] Here again, we propose that unlike licensing, government cannot be made unidirectional. As a result we will propose that the structural relations holding between the members of long vowels and diphthongs is that of left-to-right V-to-V government, i.e., metrical government. Consider now the representations in (21).

(21)   a.   long vowel   b.   diphthong
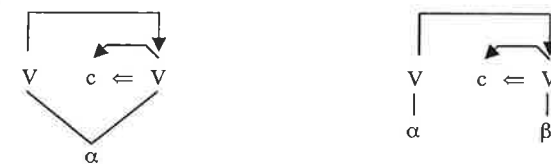
As noted above, we assume that just like non-vocalic governors, proper governors

---

[23] I am well aware of the fact that these structures are not complete innovations in phonological theory but rather the adaptation of branching nuclei into a CV framework.

[24] Note that this representation is not at all ad hoc in CV phonology. Think, among other things, of the quantity sensitive nature of stress assignment where the two structures seem to figure in a parallel way.

also need a licence to govern, see also section 2.2. above. This licence is provided by left-to-right V-to-V government by a stressed vowel within the foot. Recall that word-initial absence of consonant lenition can be connected to this fact. Namely, in a word-initial CV sequence the vocalic position will never be a governor. This is because if this vocalic position is stressed it can only govern left-to-right. If it is unstressed, however, it has no preceding stressed vocalic position from which it could receive governing licence and thus remains a non-governor. It follows from this observation that only government licensed vocalic positions may properly govern. We formulate this observation as (22) below.

> (22) Proper governors must be licensed to govern by their prosodically dominant peers within the foot.

Notice also that it is exactly proper government that spoils the inherent silence of the enclosed empty consonantal position in (21a) and (21b) creating a smooth vocalic transition from the first half of the vocalic cluster onto the second.

3   The beginning of the word in Balogné (2002)
Consider the data below taken from Balogné (2002:2).

> (23) GA flapping – data set 1
> a. [t^h] ; Tom, tomorow
> b. [ɾ] ; atom, competitive

The data in (23) illustrate the well-documented phenomenon of GA flapping whereby word-initial and foot-initial t's get aspirated whereas foot-internal intervocalic t's undergo flapping. According to Lowenstamm (1999) the introduction of syllabic constituency to replace traditional boundary markers and conjunctions like the one in (2) has no success when facing a process like GA flapping. This is due to the fact that all the t's are syllable onsets in (23), yet the phonology identifies them as two different sites with respect to lenition. It is furthermore obvious that a non-derivational theory coupled with a non hierarchical representational framework has access neither to rule ordering nor to resyllabification.[25] As we have seen above Lowenstamm's framework reduces the phonological hierarchy to strictly alternating consonantal and vocalic positions. In order to avoid making reference to either prosodic hierarchy or morphological boundary marker, Lowenstamm (1999) – as already noted above – introduces the empty cv unit at the beginning of the word, which is supposed to replace the traditional # boundary marker.[26] As a result, not only word medial but also word initial empty vocalic positions have to be silenced. It must be mentioned in passing, however, that the vocalic part of the word-initial empty cv unit will never be the site of vowel-zero alternation.[27] Note that the presence of word-

---

[25] Works having recourse to traditional prosodic hierarchies make use of these two devices. For treatments of lenition sites in such frameworks see Kahn (1976), Kiparsky (1979), Giegerich (1982), Nespor & Vogel (1986), Rubach (1996).

[26] The fact that it is no longer a morphological material but rather a phonological one is manifest in the fact that it has phonetic content. The c part of the empty cv unit is inherently silent whereas its vocalic part is inherently loud requiring proper government to be silenced.

[27] This is only true if we do not regard alternation resulting from concatenation and cliticization as true vowel-zero alternation.

initial empty cv units comes handy in capturing a host of phonological generalisations including phonotactic restrictions. Thus, a single consonant and an onset cluster will fall out as natural word-beginning consonant-sequences whereas a bogus cluster will automatically be excluded. Consider the representations in (24) below.

(24)   a. many [meni]   b. trap [træp]
c. *# tpa
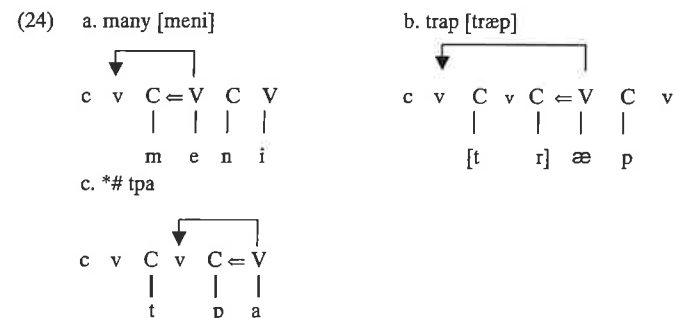
In (24a) the vocalic position dominating the mid-front vowel silences the empty vocalic position of the word-initial empty cv unit. As a result, the word initial consonantal position is licensed and ungoverned, a configuration under which a consonantal position is said to be strong. In this framework the fact that words can begin with a single consonant is connected precisely to the fact that the full-fledged vocalic position can properly govern the initial vocalic position of the empty cv unit thereby silencing it. A similar situation is said to obtain in (24b), where the word-initial consonant cluster is such that it forms a closed domain (enclosed in square brackets), cf. Scheer (1998).[28] In (24c), however, the two members of the bogus cluster cannot form a closed domain due to lack of any phonotactic dependencies. The only available means to keep the vocalic position in between the two consonants mum is proper government by the vocalic position dominating [a]. Proper government will thus never reach the initial empty vocalic position and as a result the prediction is that bogus clusters will never be able to surface word-initially. This prediction is born out by the data.

The fact that word-initial consonants are less likely to lenite is connected to government, licensing and the existence of word-initial empty cv unit by Balogné (2002:7) among others. She illustrates her observations with the data under (25).

(25) a. (atom)   b. (at)(omic)   c. vT(om)[29]

---
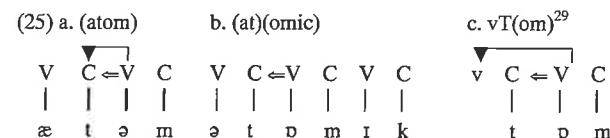
[28] According to Scheer typical onset like (obstruent plus liquid) clusters constitute a closed domain immune to outside government. Consequently, proper government may skip the entire phonotactic domain striking the initial empty vocalic position silencing it.

[29] Note that Balogné (2002:7) represents *Tom* as (vTom). This representation, however, is not fully consistent with the framework she is describing: Since according to Szigetvári a stress domain starts with the stressed vowel and extends up to the next stressed vowel not including the latter, I fail to see why the entire word *Tom* should be bracketed. Therefore I have chosen to represent *Tom* as vT(om).

In (25a) the foot-internal consonant is both governed and licensed and thus undergoes vocalic consonant lenition, according to the theory of Dienes & Szigetvári (1999). In (25b) and (25c) the consonantal position dominating the melody represented as [t] finds itself in a strong phonological position: in the former case because the stressed vowel (initiating a stress domain) is unable to properly govern (right-to-left), and thus the position remains licensed and ungoverned; in the latter case the vowel although stressed again it is able to properly govern the word-initial empty vocalic position because according to the theory of VC phonology the word-initial empty vocalic position followed by the word-initial consonantal position does not constitute a stress domain, hence the lack of parentheses around vT in (25c). Recall that if it constituted a stress domain the vocalic position dominated by [ɒ] would not be able to govern the initial empty vocalic site since such a move would run against the Antipenetration Constraint (AC) in the framework of Dienes & Szigetvári (1999).

Notice the logical consequences of the proposal: at first sight it would seem that it is only unstressed vowels that have the capacity to properly govern (25a) whereas stressed ones are deprived of this capacity (25b). But then turning to (25c) it becomes obvious that stressed vowels are also proper governors in as much as they are not preceded by a stress domain. This also means that the stressed vowels can indeed penetrate a stress domain but only the one of their own. In other words, they are capable of governing out of their own stress domain but not into a neighbouring one. To visualise matters, it seems that two brackets (an opening and a closing one) are needed to constitute a buffer to government, a strange constraint in itself. Notice that attributing stressed vocalic positions with proper governing capacity is a necessary step in this framework due to the fact that initial empty vocalic positions are postulated before consonant initial words that need to be governed in order to remain silent.

Furthermore, Balogné (2002:8ff) illustrates the shortcomings of the AC by pointing out that the stress-sensitivity of flapping vanishes once we extend our investigation beyond the word domain. The data in (26) illustrate that word-final t's undergo tapping regardless of whether the next word begins with a stressed or an unstressed vowel. Moreover, word-initial t's always remain strong, i.e. aspirated and word-final t's undergo glottalization when they are followed by either a consonant initial word or a pause. Consider the data taken from Balogné (2002:8).

(26) GA flapping – cross word effects.
a. hi[ɾ] Ánn, hi[ɾ] Aníta, hi[tʔ] me
b. grow [tʰ]omátoes
c. a [tʰ]íssue, a[ɾ] íssue
d. wai[ɾ] a mínute

On the basis of the data in (26) Balogné points out that Dienes & Szigetvári's (1999) theory is unable to capture the fact that the stress sensitivity of flapping disappears beyond the word-domain. She goes on to suggests that it is possible to capture the differences between word-internal and cross-word flapping by assuming that government responsible for flapping (i.e. proper government) operates between melodies. While word internally the target *t* and the following vowel are adjacent both melodically and skeletally this does not hold true of a word-final *t* and a following vowel initiating the next word. In the latter case the boundary marker will prevent the two segments from being adjacent on the CV tier.

Balogné's second suggestion is that stressed vowels – since they seem to support the melodic make-up of a preceding consonant – prefer licensing to government, i.e., if both conditions are met they choose to license, whereas unstressed vowels are more prone to damage the consonant in their CV units and therefore they prefer to govern. Csides (2000) connected this skewed propensity of stressed versus unstressed vowels to govern vis-a-vis license to the principle of government licensing proposed by Charette (1990) for consonantal governing relations. The application of the idea to proper government was explained in section 2.2. above: very broadly, in languages having trochaic feet, for a vocalic position to be able to properly govern from right to left it must receive licence to do so from the dominant vocalic position within the foot. In other words, unstressed vowels acquire the capacity of being able to properly govern by virtue of being preceded by a stressed vowel within the same foot. The idea is depicted in (27) below.

(27) *bakery* [beɪkəri/beɪkri]

metrical government
proper government

The representation in (27) shows how metrical government grants governing licence to the final unstressed vocalic position so that it can properly govern the position dominating the schwa inside the foot resulting in syncope. The concept of government licensing of proper governors derives the same effects as the Antipenetration Constraint but from a principle of grammar – that of government licensing – that has been suggested earlier for entirely different purposes.

In order to account for the data in (26) Balogné (2002:9) proposes the constraint in (28).

(28) A consonant (including both its melodic and skeletal position) cannot be simultaneously governed and licensed by the same vowel.

The representations in (29), also taken from Balogné (ibid), illustrate how she chooses to derive cross-word lenition effect from the observations mentioned above.

(29)   a. átom   b. atómic

According to the proposal, licensing (indicated by the double arrow) takes place at the skeleton while government (indicated by the single arrow) is a relation between melodies. In (29a) the word initial vowel /æ/ is stressed so it will first license the preceding empty consonantal position, but since it is empty, i.e., it does not interfere with possible relations contracted on the melodic tier, the vowel has the ability to govern some other consonantal material at the melodic level if one becomes available

through concatenation. The second vowel, however, being unstressed, will first discharge its governing potential on the consonantal melody represented by /t/ but having done so it loses its opportunity to do anything else. This is due to the fact that it could only discharge its licensing potential on the preceding consonantal position which it also governs. This would amount to a violation of (28) above.

In (29b), however, the same word-initial vowel is not stressed, thus - according to Balogné (2002:9) – it tries to govern first, which will not materialise until the word is put into such a context by concatenation with a consonant final word., e.g., *hit atomic elements*. In that case, Balogné claims, government can reach the underlined /t/ and thus it surfaces as a tap. At the same time, the initial empty consonantal position gets its share of licensing since this will not violate (28). The stressed vowel in (29b), on the other hand, will license the /t/ making it aspirated, but cannot simultaneously govern it in accordance with (28), consequently its governing power will remain unexploited.

Consider further the data in (30) below, which shows that function words behave differently from major categories.

(30) Balogné (2002:10)

    a. I want you [ɾ]o help me.

    b. Don't lie [ɾ]o me.

    c. [tʰ]o tell the truth

    d. [tʰ]omorrow

    e. see you [ɾ]omorrow

The initial /t/ in *to* is only aspirated when at the beginning of the utterance (30c), otherwise it is flapped when it is preceded by a vowel final word and therefore appears in the conditioning environment, (30a-b). The flapping cases are accounted for in the framework sketched out by Balogné in the following manner: she proposes that Lowenstamm's empty cv boundary marker only characterises lexical words to the exclusion of function words. Consequently, so the argument goes, words like *to* lack it and that is why ..….*lie to*..….creates exactly the same context for *t* as *atom* does. This is illustrated as in (31) by Balogné (2002:10).

(31) a. atom   b. lie to

```
     c ⇐ V   C   V   C   v        …..V   c   V   C   V
         |   |   |   |                |       |   |   |
       ←   æ   t ← ə   m              a       ɪ   t ← ə
```

The question as to how the boundary marker appears to the left of function words at the beginning of utterances (30c) arises. According to Balogné, there are two ways of explaining this. Either as opposed to what Lowenstamm (1999) claims there is an empty cv unit at the beginning of all types of words, which is deleted in certain environments or the empty cv unit is indeed absent from before function words and is inserted only utterance initially.[30]

---

[30] Note that in Balogné's framework – as she also points out – a VC analysis fails in either case. This is because in consonant-initial words it is the vocalic position of the first VC unit that functions as a boundary marker (i.e., it absorbs the governing potential of the following nonempty vocalic position). It can never be inserted or deleted, however, since Szigetvári (1999) claims VC units to be inseparable.

Notice that Balogné's (2002) account of the word-initial site needs to be revised for the following three reasons. First, Balogné clearly assumes a temporal sequence of events initiated by vocalic positions claiming that stressed vowels are prime licensors, which means that only after having attempted to discharge their licensing potential can they govern. In the case of unstressed vowels the opposite situation obtains, viz., they seem to be prime governors, that is first they try to govern and only after having done so are they capable of licensing. It is important to emphasise that her analysis crucially hinges on this distinction. Furthermore, government is assumed to be a relation contracted along the melodic tier as opposed to licensing, which takes effect on the skeleton. On these assumptions, however, it is difficult to see why (30d) and (30e) should behave differently. More specifically, I do not see why – under the framework outlined above – the initial consonant in *tomorrow* (30d) should not flap. This is because the initial vowel is unstressed in *tomorrow*, which Balogné claims to be a prime governor, i.e., it must first try to govern and only after having done so should it try to discharge its licensing potential. It comes as a surprise then that the unstressed vowel in the first syllable of the word chooses exceptionally to skip the intervening melody of the word-initial /t/ and govern the empty vocalic position of the postulated empty cv unit. What we expect, according to the sketch of the theory, is that the first nonempty (unstressed) vocalic position should indeed govern first but that the target should be the initial consonantal melody /t/ as government takes place on the melodic tier. This position being governed cannot be licensed since this is excluded by (28) in Balogné's framework. The resulting configuration thus should be one in which the initial consonant of *tomorrow* should be governed and unlicensed and as a result should undergo flapping */[ɾəˈmɒɾəʊ/. Unfortunately, this prediction is not borne out, as is illustrated by (30d). Notice further that this prediction is born out when the same lexical item follows a vowel-final word as in (30e).

It also remains unclear under the analysis sketched above why the *t* in the first syllable of *tomato* should be exempt from flapping. Once again, the unstressed vowel in the first syllable is a prime governor, i.e., it tries to govern first. Government takes place on the melodic tier where the vocalic melody is immediately preceded by the consonantal melody of *t*, and thus the latter should be governed the phonetic manifestation of which should be flapping.

A second remark that can be made in connection with the analysis sketched above is that if we accept the hypothesis in (28) above, namely that a consonantal position cannot be simultaneously governed and licensed by the same vocalic position we end up with a configuration in which foot-internal onset consonants will be unlicensed and governed, cf. (29a) above. However, Balogné (2002:6-7) explicitly subscribes to the basic tenets of Dienes & Szigetvári's (1999) theory in which unlicensed and governed consonants should undergo both consonantal and vocalic consonant lenition, i.e., both types of consonant lenition phenomena should be attested in this context. It is worth mentioning here that although Dienes & Szigetvári's theory does not cater for the possibility of consonantal consonant lenition[31] in foot-internal intervocalic position, Harris (1994:195) indeed mentions such a system under the heading 'glottaling (wide distribution)'.

The third remark is a more general theoretical one and refers to the requirement of locality in strict CV phonology. It is generally accepted amongst CV phonologists that when structural relations are established on the CV skeleton

---

[31] Recall that this means loss of place contrast without spirantisation or voicing, i.e., glottalization, e.g.

maximally one position (that of the opposing category) may be skipped, cf., the case of proper government.[32] In the case of *hit Aníta*, e.g., the two positions, an empty vocalic position followed by the initial empty consonantal position in the next word will have to be skipped, which represents a departure from the generally recognized notion of locality constraints. Consider the representation in (32) below.

(32) hit Aníta

$$C \Leftarrow V \quad C \quad v \quad c \Leftarrow V \quad C \Leftarrow V \quad c \quad V \quad C \quad V$$
$$\quad| \quad | \quad | \quad\quad\quad | \quad | \quad | \quad\quad\quad | \quad |$$
$$\quad h \quad \scriptstyle I \quad t \quad \leftarrow \quad \ni \quad n \quad i: \quad\quad t \leftarrow \ni$$
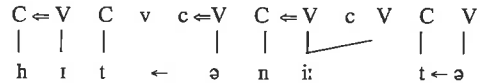
(32) shows that locality in the sense introduced above is lost at the cross-word site above even if governor melody and governee melody are adjacent on the melodic tier.

These three observations lead us to modify the analysis proposed by Balogné (2002) incorporating her insight that governing relations are indeed established on the melodic tier and also that a consonantal position cannot be governed and licensed by the same vocalic position simultaneously.

4   Licence to properly govern

We have seen earlier that lack of pretonic syncope and absence of foot-initial lenition may all be derived from a fundamental underlying property of grammar, namely, the complementary governing potential of different types of vocalic positions. The upshot of the discussion was that in any case a properly governing vocalic position must receive licence to govern from its prosodically dominant peer within the foot. In other words, it is the recessive vocalic positions that are able to govern but only by virtue of receiving licence to do so from their dominant peer within the foot. This potential of the government licensed vocalic position is depleted on an empty consonantal position in the case of long vowels and diphthongs and is phonetically manifested in the smooth transition from the first vocalic position onto the second in this type of cluster, cf. also Szigetvári (1999).

Finally, it must be noted that if (22) is unified with Government Licensing (Charette 1990, 1991) the following generalization can be made about phonological strings.

(33) All governors must be licensed to govern except the ultimate head of the domain.

Consider how this proposal can be extended to cover lack of word-initial lenition and the distribution of flapped versus aspirated *t*.

As far as word-internal contexts are concerned we seem to be at ease with the proposal in (22), víz., that proper governors must be licensed to govern by their prosodically dominant neighbours within the foot. Consider the data given in (23) above and repeated here as (34) for convenience.

---

[32] An exception to this is the case of a closed domain Scheer (1998), where an entire CvC sequence may be skipped to silence the word initial empty vocalic position. Cf. also Csides (2000) for a similar approach to both onset and coda clusters.

(34) GA flapping – data set 1
   a. $[t^h]$; Tom, tomorow
   b. $[\scriptstyle r]$; atom, competitive

According to the proposals we have put forward in section 2, it is easy to see why there is no lenition in (34a). In *Tom*, the stressed vowel can govern only left-to-right (metrical government) and can only license the word-initial *t*. In *tomorrow* although the first vowel is unstressed it has no preceding dominant pal which could grant it government licence, and therefore the first *t* in *tomorrow* can only be licensed but not governed. In (34b) all the three *t*'s undergo flapping. This is because all the three *t*'s are followed by an unstressed vowel which all receive government licence from a preceding stressed vowel, the head of the foot.
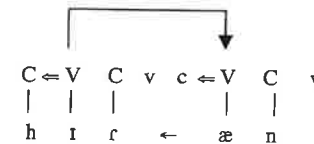
If, however, we extend our investigation beyond the word domain and examine the data in (26), repeated here as (35) for convenience, we have to modify our proposal relaxing the requirement that the government licensed proper governor should be a recessive position in a trochaic foot across words, too.
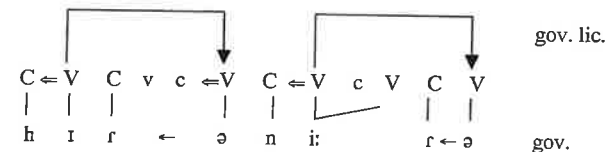
(35) GA flapping – cross word effects.
   a.   hi[ɾ] Ánn, hi[ɾ] Aníta, hi[t[7]] me
   b.   grow [tʰ]omátoes
   c.   a [tʰ]íssue, a[ɾ] íssue
   d.   wai[ɾ] a mínute

Examining the first two examples in (35a), we immediately notice that stressed vowels also seem to be able to properly govern but only in a cross-word context. Consider the representation in (36) below.

(36)   (a)

$$C \Leftarrow V \quad C \quad v \quad c \Leftarrow V \quad C \quad v$$
$$\quad| \quad | \quad | \quad\quad\quad | \quad |$$
$$\quad h \quad \scriptstyle I \quad \scriptstyle r \quad \leftarrow \quad æ \quad n$$

(b)

$$C \Leftarrow V \quad C \quad v \quad c \Leftarrow V \quad C \Leftarrow V \quad c \quad V \quad C \quad V \quad\quad\text{gov. lic.}$$
$$\quad| \quad | \quad | \quad\quad\quad | \quad | \quad\quad\quad | \quad |$$
$$\quad h \quad \scriptstyle I \quad \scriptstyle r \quad \leftarrow \quad \ni \quad n \quad i: \quad\quad \scriptstyle r \leftarrow \ni \quad\quad\text{gov.}$$

The representations in (36) illustrate cross-word government licensing and subsequent government on the melodic tier. It must also be added that we do not postulate an empty cv unit at the beginning of words. We assume that phonological words begin with a licensed consonantal position even if that position happens to be melodically empty: for the exact details of this proposal see Csides (2000).

Consider now the items in (35c)[33] represented as (37a) and (37b) below respectively.

(37)   a.   a [tʰ]issue
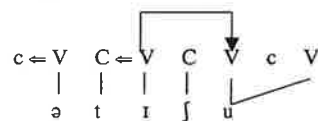
     b.   a[ɾ] issue
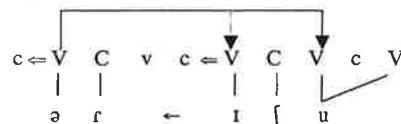
In (37a) the stressed vocalic position dominating [ɪ] grants governing licence to the first vocalic position of the word-final long [uː], which in turn can govern the second position of this long vowel. Although the first (stressed) vowel could be government licensed by the vocalic position of the indefinite article, the vocalic position dominating [i] will be a prime licensor since it is stressed. Since this form cannot be treated as a lexicalized sequence the word *tissue* will leave the lexicon as an individual item whose initial stressed vowel (not receiving license to govern in the lexicon from a preceding full vocalic position) has by that time licensed the initial consonantal position. As a result the word-initial consonantal position dominating the melody of [t] leaves the lexicon as a licensed position. As a result the initial [t] cannot be governed by the following vocalic position even if that vocalic position receives licence to govern through concatenation since the initial [t] is already licensed and this would violate (28). In (37b) no such problem arises since the skeletal position which is lexically licensed and the skeletal position dominating the melody to be governed are not identical, hence government, i.e., flapping can take place.

The item in (35d) is also easy to tackle. The indefinite article between the verb and the noun will be unstressed and it will form the recessive position of a binary trochaic foot with the preceding verb (weɪɾə). Being unstressed, the second vowel will be a prime governor hitting the final consonant of *wait* on the melodic tier. The position dominating this consonant will not be licensed due to (28). Notice that this form may well be treated as a lexicalized item. Consider now the items in (30) repeated as (38) below for ease of reference.

(38)
     a.   I want you [ɾ]o help me.
     b.   Don't lie [ɾ]o me.
     c.   [tʰ]o tell the truth
     d.   [tʰ]omorrow
     e.   see you [ɾ]omorrow

(38a) and (38b) work exactly like (35d): (juːɾə) and (laɪɾə) form binary trochaic feet

---

in connected speech where flapping will take place according to the mechanism depicted above. In (38c) and (38d) both the vowel of *to* and the first vowel of *tomorrow* are unstressed and hence they are prime governors. According to the system of Balogné they should indeed govern the melody of the preceding position once government proceeds on the melodic tier. This means that her system predicts lenition in both (38c) and (38d): this prediction is not borne out. Notice, however, that neither in (38c) nor in (38d) is the unstressed vowel preceded by another vowel which could grant the necessary licence to govern. Thus, neither the vocalic position of *to* nor the first vocalic position of *tomorrow* is able to govern and as a result they are allowed to discharge their licensing potential on the preceding consonantal position. These consonantal positions in turn become licensed and ungoverned, i.e., strong, the phonetic manifestation of which is aspiration.

The remaining two items are (35b) and (39e), repeated below as (39a) and (39b) respectively.

(39)   a. grow [tʰ]omátoes
         b. see you [ɾ]omorrow

These two items constitute a challenge to theories attempting to account for the distribution of flapped versus aspirated *t*. While (39b) is easily accounted for in the framework we have proposed, (39a) sneaks out of analyses since the first vocalic position of *tomatoes* is unstressed, thus a prime governor. However, as shown by the transcription, aspiration takes place. Notice, however, that (39b) can easily be treated as a form already lexicalized, i.e., a sequence stored in the mental lexicon of the speaker. In such cases it is easy to see that the government licensed unstressed vocalic position in the first syllable of *tomorrow* will be able to perform its primary role as a governor flapping the initial consonant. All this becomes clearer once we consider the item in (39a).

In (39a) the unstressed vowel in the initial syllable of *tomatoes* cannot perform its primary role as a governor since although it may receive governing licence post-lexically, by the time the two items are concatenated the initial [t] of this word will have been licensed in the lexicon. This is because – *grow tomatoes* being a non-lexicalized item – *tomatoes* leaves the lexicon as an individual item with no full vocalic position preceding the unstressed vowel in the initial syllable of the word. As a result, the word-initial [t] escapes government hence flapping in the lexicon. Remaining ungoverned, however, it can be licensed since this will not violate (28). As a matter of fact, the unstressed vocalic position in the initial syllable of *tomatoes* will have the chance to perform its secondary role of a licensor. It is clear from this discussion that the a consonantal position cannot be licensed and governed by the same vocalic position simultaneously even if one of these forces affect the consonant in the lexicon while the other becomes available post-lexically. In such cases the force becoming available later is blocked.

As a result of the assumptions made above the data in (38) are all straightforwardly accounted for. All we need to add with respect to (38a), (38b) and (38c) is that since function words do not carry a stressed vocalic position when they leave the lexicon, they need to be incorporated into a trochaic foot where a preceding stressed vowel will provide governing licence to the vocalic position of the infinitival particle so that the latter position may properly govern. Note that [juːɾə] and [laɪɾə]

are also best treated as lexicalized strings[34].

Under the proposal put forward here, however, some of the items in (35) seem, at first sight, to be problematic. (35d) poses no problem since *wait a minute* can be treated as a lexicalized form and (35b) has also been covered above assuming that *grow tomatoes* is a non-lexicalized form. As far as (35c) is concerned we may again refer the case of *at issue* to lexicalization by assuming that this case is different from *a tissue* in that the latter is not at all lexicalized. As a result of this constellation the initial stressed vocalic position in *tissue* although may receive governing licence post-lexically the initial consonant of *tissue* will by that time have been licensed and thus cannot be governed.

What needs to be revisited is two items in (35a), namely *hit Ánn* and *hit Aníta*.[35] The first one of these seems to be more problematic: we proposed above that across words stressed vowels may also receive licence to properly govern, i.e., that both *hit Ánn* and *hit Aníta* are susceptible to flapping. However, as we have seen above in connection with the data in (38) and (39) in non-lexicalized forms such as *hit Ánn* and *hit Aníta* both vowel initial words *Ánn* and *Aníta* respectively contain a licensed empty consonantal position on leaving the lexicon. This empty consonantal position being licensed cannot absorb government emanating from the government licensed first vocalic position of either *Ánn* or *Aníta* after these have been concatenated with *hit*. However, since the initial consonantal position is empty, proper government may reach the word final consonant of *hit* on the melodic tier causing flapping. This does not violate (28) since it is different consonantal positions that are licensed and governed respectively by the same vocalic position.

5   Conclusion

In this paper we have examined how government licensing could be extended to vocalic positions in a CV framework. Originally the idea was proposed as a condition on the grammaticality of real clusters in standard GP by Charette (1990, 1991). Translated into a CV framework, we have tried to show that not only consonantal positions need licence to govern but also vocalic governors require this structural relation. While word-internally government licensing is accompanied by vowel reduction (foot-internal government licensing), or phonotactic dependencies (long vowels and diphthongs), this is not so across the word. We have attempted to account for the distribution of flapped versus aspirated allophones of *t* in terms of government licensing by pursuing the idea that it is indeed feasible to account for word/utterance initial lack of flapping by making reference to lack of licence to govern. Furthermore, the concept of lexicalized strings also played a crucial role in the analysis. Finally, we saw how the idea that a consonantal position cannot be licensed and governed simultaneously by the same vocalic position helps explain the distribution of flapped versus aspirated [t] in certain contexts.

---

[34] In an alternative view, "to" in the strings [juːrə] and [laɪrə] could be considered as a clitic which behaves as a lexicalised 'chunk' together with its host for the purposes of government licensing.
[35] We abstract away from the third item, i.e., *hit me* because it constitutes an entirely different problem. I included it into this paper only to show that an empty vocalic position (between [t] and [m]) is not a proper governor.

References

Balogné Bérces, Katalin (2002) The beginning of the word revisited. The Even Yearbook 5. 1-16. Budapest: ELTE SEAS Working Papers in Linguistics.

Charette, Monik (1990) Licence to govern. Phonology 7. 233-253.

Charette, Monik (1991) Conditions of Phonological Government. Cambridge: CUP.

Chomsky, Noam & Morris Halle (1968) The Sound Pattern of English. New York: Harper & Row.

Cser, András (2001) A zörejhangok gyengülési és erősödési folyamatainak tipológiája és modellezése. [The typology and modelling of weakening and strengthening processes of obstruents.] PhD dissertation. Budapest: Theoretical Linguistics Programme ELTE.

Csides, Csaba (2000) : Government and Licensing: A CV analysis of Consonant lenition. SOAS Working Papers in Linguistics 10. 41-80. London: SOAS, University of London.

Cyran, Eugeniusz (1998) Structure and Interpretation: Studies in Phonology: PASE Studies and Monographs 4. Lublin: Wydawnictwo Folium

Dienes, Péter & Péter Szigetvári: (1999) Repartitioning the skeleton: VC Phonology. Ms., Budapest: Eötvös Loránd University.

Dienes, Péter (2000) VC phonology: A theory of consonant lenition and phonotactics. MA thesis: Budapest: Eötvös Loránd University.

Durand, Jacques & Bernard Laks (eds.) (1996) Current Trends in Phonology: Models and Methods. ESRI, University of Salford Publications

Giegerich, Heinz (1992) English Phonology: An Introduction. Cambridge: CUP.

Harris, John (1990) Segmental complexity and phonological government. Phonology 7. 255-300.

Harris, John (1992) Licensing inheritance. UCL Working Papers in Linguistics 4: 359-406.

Harris, John (1994) English Sound Structure. Oxford: Blackwell.

Harris, John (1997) Licensing Inheritance: an integrated theory of neutralisation. Phonology 14. 315-370

Harris, John & Edmund Gussmann (1998) Final codas: why the west was wrong. In Cyran (1998:139-162).

Hogg, Richard & C.B. McCully (1987) Metrical phonology. Cambridge: CUP.

Kahn, Daniel (1976) Syllable-based Generalisations in English Phonology. PhD. Outstanding Dissertations in Linguistics: New York & London: Garland.

Kaye, Jonathan (1990) Coda Licensing. Phonology 7. 301–330.

Kiparsky, Paul (1979) Metrical structure assignment is cyclic. Linguistics Inquiry 10. 421-442.

Lass, Roger (1994) Old English: A historical linguistic companion. Cambridge: CUP.

Lowenstamm, Jean (1996) CV as the only syllable type. Ms., Université Paris 7. Appeared in Durand & Laks 1996: 419-442.

Lowenstamm, Jean (1999) The beginning of the word. In John Rennison & Klaus Kühnhammer (eds.) Phonologica 1996. 153-166. La Hague: Holland Academic Graphics.

Nespor, Marina & Irene Vogel (1986) Prosodic Phonology. Dordrecht: Foris.

Rubach, Jerzy (1996) Shortening and ambisyllabicity in English. Phonology 13. 197-237.

Scheer, Tobias (1998) A Theory of Consonantal Interaction. Folia Linguistica XXXII.3-4:201-237.

Scheer, Tobias (in prep) CVCV: A Syntagmatic Theory of Phonology. ms. Université de Nice.

Ségéral, Philippe & Tobias Scheer (1999) The Coda Mirror. Ms., Université de Paris and Université de Nice.

Szigetvári, Péter (1999) VC Phonology: a theory of consonant lenition and phonotactics. PhD dissertation. Budapest: Eötvös Loránd University.

Wells, John (1982) Accents of English. Cambridge: CUP.

K~ø : morpho-phonology in Turkish

Ann Denwood
hillview@dircon.co.uk

1   Introduction

Vowel~zero alternation is analysed in GP as the interpretation of an empty nucleus when it fails to be properly governed. In this paper it is proposed that [k] which alternates with zero in Turkish is the interpretation of an empty onset whose following nucleus cannot properly govern it.

Three contexts where [k] fails to alternate with zero even though a potential proper governor is available are discussed. A hypothesis in which all words are composed of a minimal 'stem' template followed by subordinate 'suffix' templates provides an explanation both for the k~ø alternation and for its failure. Different restrictions on stem and suffix templates, together with the need to avoid a sequence of more than two adjacent nuclei, complete the picture.

The context for k~ø alternation and its failure are briefly described in section 2. Section 3 is devoted to a summary of the template hypothesis. The context for regular alternation is analysed in 4, followed in 5, 6 and 7 by the exceptional cases. The conclusion in 8 is that the template hypothesis provides an insight into the k~ø phenomenon in Turkish.

2   Contexts for k ~ ø

Word-final [k] alternates with zero when a vowel-initial suffix is added, e.g. *ayak* [ayak] 'foot' ~ *ayağı* [ayai] 'foot (3.poss)'. Deletion of morpheme-final [k] and its exceptions are discussed by Sezer (1981). Exceptions to the alternation can be summed up as follows:

(i)   most monosyllabic[1] words, e.g. [ek] 'affix' ~ [eki] 'affix (3.poss)'

(ii)   some verbal morphology, e.g. [bɪrak] 'leave' ~ [bɪrakadʒak] 'leave (fut)'

(iii) following a long vowel, e.g. [merak] 'curiosity' ~ [meraːki] 'curiosity (3.poss)'

Words in the third group are unusual in two ways. Firstly, they are loan words whose vowels were long in the original language (Arabic), but are not necessarily interpreted as long in Turkish. Native Turkish words do not have long vowels except for those which derive from a sequence of two nuclei (i.e. 'pseudo' long vowels). Secondly, all Arabic long vowels are shortened before a final consonant, leading to the alternation [merak ~ meraːki].

I suggest that the exceptions to k~ø can be explained by applying the Template Hypothesis, which was first used by Goh (1996) for Beijing Mandarin and later adapted and extended first to Khalkha Mongolian (Denwood 1997), then to Turkish (Denwood 1998). The first exception to k~ø can be explained by the special privileges of an independent 'stem' template, the minimal word. The second exception can be explained by the structure of certain 'suffix' templates which do not trigger k~ø. The third exception arises in order to avoid a sequence of three adjacent nuclei.

3   The Turkish template hypothesis

An adaptation of the Beijing Mandarin four position template (Goh 1996) has been proposed for Turkish (Denwood 1998). The template hypothesis is summed up

---

[1] Note that 'syllable' is not a constituent in GP; this word is used informally. Note also that in a syllable-based framework, words like *kırk* 'forty' *halk* 'people' are also exceptions. I am grateful to Monik Charette for reminding me of this. These words are not a problem for my analysis (section 5).