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This paper is the account of a pilgrimage, a quest for explanations, starting in Metsovo and Katara with my fellow pilgrim, τον συνοδοιπόρο και άντρα μου Gabriel Drachman. Let it be for him as well!

0. Introduction

The aim of the present paper is to show that in M.Greek manner dissimilation is controlled by phonological strength, which we see as a relation between positional faithfulness and markedness. On this point we reconsider an account of dissimilation of manner of articulation in Drachman & Malikouti- Drachman (1997) taking account of Morelli's (1998,1999) analysis of M.Greek.

It is proposed that to account for changes of the S(top) F(ricative) pattern of S(tandard) M(odern) G(reek) to the corresponding FS and SS pattern for the same data in Cypriot and other SE dialects a further constraint is required. This constraint is ONSET PROMINENCE, a sonority driven hierarchical constraint, based on the PROMINENCE ALIGNMENT of Prince & Smolensky (1993).

1.Manner dissimilation in SMG

1.1 The data

In the case of a cluster of two non-strident obstruents with voiceless C2 the output must be a Fricative + Stop voiceless cluster (FS). Therefore - depending on the input - the consonant which dissimilates can be the first one in a two-Stop cluster (SS) as in a) below, the second in a two Fricative cluster (FF) as in b) below, or both members simultaneously in a Stop +Fricative (SF) one as in c) below.

- a) S+S >FS : plek-tó> plex-tó (cp. also plek-tó below)
- b) F+F >FS : ríx-θike> ríxtike cp. líθike
- c) S+F > FS : plek-θike > pléx-tike, vláp-θik-e > vláftike

1.2 Preliminary analysis

These data are accounted for by Manner dissimilation, especially robust at morphological boundaries, as with the passive aorist morpheme $-\theta\text{-}ik\text{-} \sim \text{-}t\text{-}ik\text{-}$ in the above examples. On the other hand, when the strident s is involved in the cluster of two obstruents, it is the non-strident member which undergoes repair - either by dissimilating its continuancy or by C-loss - depending on its place of articulation (PoA), but independent of its sequential order. Thus when C2 is a strident, C1 dissimilates whether it is a labial or velar. The dental is lost, cp. $\acute{\epsilon}vix\text{-}se > \acute{\epsilon}vikse$, $\acute{\epsilon}yraf\text{-}se > \acute{\epsilon}yrapse$, but: $epla\theta\text{-}se > \acute{\epsilon}plase$ ¹. But when C1 is a strident, it is C2 that dissimilates- as expected - and what is more only if it is a voiceless dental continuant (θ), or a velar (x) (diachronically only), but not a labial (f): cp. optionally word internal: $as\theta enis \sim astenis$, $\acute{\alpha}sximos \sim \acute{\alpha}skimos$, obligatorily at a morpheme boundary: $jel\acute{\alpha}s\text{-}\theta ike > jel\acute{\alpha}stike$, but $sf\acute{\epsilon}ra$ and not $*sp\acute{\epsilon}ra$ with a labial (cp. however $sp\acute{\epsilon}ra$ in dialects, e.g. Póntos)

Apart from lexical, non-systematic exceptions, as in FF: $\acute{\alpha}f\theta onos$, $f\theta onos$ or SS $pt\acute{i}si$, $per\acute{i}ptero$, or with SS~FS alternations: $kt\acute{i}ma \sim xt\acute{i}ma$, $plekt\acute{o} \sim plext\acute{o}$ there are two systematic exceptions to the above generalizations.

a) Manner dissimilation does not apply in the case of a cluster of voiced continuants, surfacing as FF: $v\acute{o}\acute{\epsilon}la$, $\gamma\delta\acute{i}no$. b) It also fails to apply in a C+j cluster, surfacing either as two continuants FF: $kal\acute{\alpha}\theta+ja > kal\acute{\alpha}\theta x'a$, $l\acute{\alpha}\delta\text{-}ja > l\acute{\alpha}\delta ja$ or as a stop+continuant SF: $m\acute{\alpha}t+ja > m\acute{\alpha}t x'a$.

2. Manner dissimilation in Optimality theory

2.1 OCP as a Coda-Onset Asymmetry

In Drachman & Malikouti-Drachman (1997) manner dissimilation was formalized in an OT framework as an effect of an OCP constraint, by which adjacent segments with the same value of continuancy are disallowed, and IDENTITY Faithfulness constraints, which impose preservation of input features.

The domain of OCP is seen as consonants in a heterosyllabic coda-onset relation, with this positional asymmetry explaining the direction of dissimilation by weakening the coda-consonant': $plek.t\acute{o} > plex.t\acute{o}$, and strengthening (occlusivising) the one in the prominent position of an onset: $rix.\theta ike > rix.tike$; also accounting for the exchange of continuancy of a stop+fricative (SF) cluster to a fricative+stop (FS): $plek.\theta ike > pl\acute{e}x.tike$ - not handled by the OCP constraint itself. This coda-onset asymmetry also accounted for the regressive application of voice assimilation: $an\acute{i}\gamma\text{-}o$, $an\acute{i}\gamma\text{-}t\acute{o} > anix.t\acute{o}$.

In Malikouti- Drachman (2001) in order for the above prosodic account to apply not only word internally, but also in word initial position, it is further modified to a demand for a STRONG ONSET constraint in an obstruent cluster prevocally (cp. further below). On the other hand, the asymmetrical results in the case where the second member of the cluster is a sibilant fs, xs > ps, ks but θs> Os - were accounted for by an IDENTITY constraint for a sibilant, of course dominating the OCP constraint.

The systematic exceptions to Manner dissimilation in the case of voiced obstruent clusters are accounted for by IDENTITY of the feature continuant of the input, which dominates the OCP constraint. On the other hand, the systematic exceptions in the case of Cj sequences, where not only does the OCP constraint not hold, but also the voice assimilation is progressive: matx´a , pódja, is seen as due to the difference in the syllabic status of this cluster. Both segments are under onset, and thus there is no coda-onset asymmetry and the relevant constraints - OCP and regressive voice assimilation- are inapplicable. Instead, IDENTITY and progressive assimilation of the privileged onset consonant are in action.

2.2 Present Revisions

There are two points we would like now to come back to. In the SE dialects Manner dissimilation also affects a Cj cluster, to be discussed further below. However, in the dialect of N. Rodos (Newton 1072b: 167) - in contrast to Cypriot where all Cj clusters are affected- dissimilation applies only when both members of this cluster are continuants, turning the second continuant to a stop FF>FS: kaláθ-ja > kaláθk´a cp. SMG kaláθ-ja> kaláθx´a. But when the first consonant is a stop and the second a continuant, i.e. an SF cluster, there is no switch of the feature continuant: mát-ja > mátx´a as in SMG. Cp. the case of an SF >FS in voiceless stops, as in plék-θike> pléxtike above. Such data show that the prosodic approach for heterosyllabicity vs. tautosyllabicity (Drachman & Malikouti-Drachman 1997) is not enough to account for the above cases and must be revised on two points: 1) the direction of voice assimilation and 2) the addition of a further constraint demanding a Strong Onset.

Take first the direction of voice assimilation. According to Lombardi (1999), the direction of voice assimilation is normally regressive and only a higher phonological or morphological constraint imposes progressive directionality (as in the English plural formation). In our earlier account the difference in the direction of assimilation has been accounted for by a prosodic constraint; heterosyllabicity for regressive vs. tautosyllabicity for progressive assimilation, as we saw above.

However, the case of N.Rodos shows that the progressive voice assimilation must be imposed by the final segment of the stem: mat+ya> mátx´a,

kaláθ-ja> kaláθk'a, but láδ-ja > láδg'a, and not by tautosyllabicity, since a Cj cluster in this dialect- as in the other SE dialects- is heterosyllabic (cp. below 4.1 and note 6). The difference in the directionality of voice assimilation being now morphological and not prosodic, what we need is a constraint like IDENT(root) (voice) (McCarthy & Prince 1995) imposing preservation of the voice feature of the final segment of the stem at the expense of the consonant of the suffix. In other words in contrast to the regressive assimilation of the passive aorist suffix -θ-ik, or the adjectival -to/i-, which results in stem- allomorphy: aníγ-o but: anix-θik'e anix-tó, in the present case of progressive assimilation allomorphy obtains in the suffix -i ~ja, the stem remaining anti-allomorphic 2 (cp. Uniformity in Drachman 1999).

We turn now to the STRONG ONSET constraint.

The anomaly of an onset -a prominent position- being unfaithful to its feature of continuancy and being replaced by a stop as in the cases discussed, cannot be accounted for simply by heterosyllabicity. It must be seen as the satisfaction of a higher overriding constraint demanding stronger features in onset. This constraint could be the STRONG ONSET constraint proposed in Malikouti- Drachman (2001), which demands in a cluster of two obstruents that the immediately prevocalic one be stronger.

Our proposal now is that apart from OCP there is such a further constraint. This would also cover cases of word initial obstruent clusters and justify a scale of different degrees of onset strengthening, necessary for Cypriot and other SE dialects, as we will see below, where it will be reformulated as an ONSET PROMINENCE constraint.

A similar constraint for a STRONG ONSET is also proposed in Bacovič for Spanish (1995: 8) and "demands syllable initial closure by the insertion of closure breath- group- internally" with reference to Steriade (1992, 1993) for phonetic justification³. However, this constraint in Spanish applies also word- initial, whereas for Cypriot Greek it is confined to an obstruent as the second member of a cluster.

A further motivation for reconsidering the facts, discussed above, is Morelli's (1998, 1999) proposal for a global account of continuancy dissimilation in a large number of languages including M. Greek, as below.

3. OCP as a set of Universal constraints

3.1 Morelli's Theory

Morelli's proposal is based on generalizations over two obstruent clusters in onset position along the dimension continuant in 30 languages. The coda-

position is excluded since “a preliminary investigation of obstruent clusters ... in coda position has shown that this is indeed not as simple a task as for obstruents occurring in onset position (1999: 31).

Morelli assumes that whereas clusters with a resonant obey the sonority hierarchy, obstruent clusters do not (1999: 124). There are four logically possible ways in which fricatives (F) and stops (S) can cluster in the different languages wrt continuancy- that is FS, FF, SF and SS. The FS pattern is the unmarked one. The other patterns are illegal and may be repaired to the unmarked FS pattern by three Markedness constraints interacting with Faithfulness constraints

The markedness constraints are two OCP constraints in which the two values(+/-) of the feature [continuant] are formulated separately (whereas these were stated as a unique OCP constraint in Drachman & Malikouti-Drachman 1997), and a further one, the *SO negative constraint, which disallows tautosyllabic sequences of a stop followed by any obstruent, consequently any stop +fricative or stop+ stop cluster.

3.2 Morelli’s Analysis of M.Greek

Morelli’s analysis of M.Greek is based on two assumptions. First that clusters of two obstruent form a tautosyllabic onset – not only word initial but also word medially, provided that such an onset is an acceptable word initial cluster, thus following the Onset Maximization Principle (as in Setatos 1974, Joseph and Philippaki Warburton 1987). However, although she points out the possibility of a medial cluster in morphological cases like affixation to be ambiguously syllabified, for simplicity she generalizes tautosyllabicity to all cases (1999:79). This, then, indicates that what is important in the analysis is a cluster of two obstruents, the second of which (C₂) is prevocalic, thus in onset position, ignoring the tautosyllabic or heterosyllabic status of C₁. Her second assumption is the well known fact that the Greek lexicon has a two layer stratification, Katharevousa and Demotic.

As a result of the above assumptions in Morelli’s analysis, M. Greek exemplifies lexicon stratification. It is an example of a harmonically complete system with the grammar of a type 1 language, in which only FS clusters surface. It justifies the need for the *SO constraint for repairing ill-formed clusters. Cases of surface clusters of a stop+fricative (SF) as in ks, ps, are accounted for as due to the dominance of a higher constraint of stridency over the *SO constraint (on this point see also Drachman & Malikouti-Drachman 1997, above 2.1). On the other hand, other offending patterns are repaired either by the *SO constraint in Demotic –as in an FF pattern repaired to an FS plexθike> pléxtike- or they belong to the Katharevousa Lexicon and not to the Demotic one. Thus, a cluster of voiced fricatives, vð/vγ: ενδομάδα- vðomáða, avγó, vγázo, vγ’éno,

γδίνο. (1999: 80,3) - for which, however, FF is the only permissible pattern in M.Greek Demotic- for Morelli belongs to Katharevousa (1999 : 80,3), and is thus excluded from her analysis altogether. Furthermore, the word -initial as well as medial SF and FF patterns, which are the output of a Cj cluster: px'ato, θx'áfi or kupx'á, mátx'a kaláθx'a, are also ignored.

It seems, then, that in contrast to Morelli's claim 1) M.Greek is not an example of a harmonically complete system of a type 1 language, where only FS patterns surface. Other patterns of an FF as well as of an SF type are well integrated in the system indicating a language of type 4, and thus there is no need for an appeal to lexicon stratification for such data⁴.

Further –since for word medial clusters in M. Greek tautosyllabicity is accepted only for reasons of simplicity, Morelli's constraints could also be tested in the case of heterosyllabic obstruent clusters, despite her reservations (1999:48). This is not unexpected, since the *SO Markedness constraint, which disallows a cluster of obstruents consisting of a stop followed by another stop or a fricative, is in a way reminiscent of the relation of two heterosyllabic consonant in a coda - onset position. On the other hand, however, it will be shown that when we extend the *SO constraint to Cypriot (below 4.2) it must be modified. Alternatively, a further constraint must be added such as the one for a strong onset that we proposed above. Finally, although for the cases examined there is no special demand to split the OCP constraint into OCP (-cont) and OCP (+cont), we adopt the split version here.

4. Manner Dissimilation in Cypriot Greek

4.1 The data

The repair of ill-formed obstruent clusters of an FF or SF pattern to the FS one when their second member is a voiceless consonant, is pangreek: thus for Cypriot cp. FF> FS esfáx-θin> esfáxtin, SF> FS eplék-θin>epléxtin, as well as ésfax-sen > ésfaksen, exoris-θin> exoristin as in SMG above.

However, in Cypriot and some other SE dialects- such as Xios, Rodos, Kos and Kálymnos (Newton 1972 b : 109) – even the pattern of voiced consonants clusters FF: avγó, is repaired to an FS pattern: avgón etc. A cluster of r+ voiceless/voiced fricative: rθ, rx, rδ, ry is also repaired, a fact which indicates the fricativity of the r in these dialects: e.g. írten, skórdos ~skórtos, for SMG írthe, skórdo. An exception to this last case are clusters with a labial as C2 :rf/rv: a(δ) érfin *a(δ)érfin for adel/rfós (a further indication of markedness of labiality).

In the cases above there are no synchronic alternations, but as a result of this larger application of onset “strengthening”, obstruent clusters in these dialects have mostly a stop (voiceless or voiced) as a second member, and thus

an FS pattern. Exceptions are: a) an SF pattern of a velar/labial + s: ks/ps , b) an FF pattern of sibilant + labial eg. sf, zv. or c) an SS pattern of a labial + palatal stop: pk' as discussed below. The FF or SF patterns of the Cj clusters in SMG : peðjá , mátx'a etc., are also repaired to an FS pattern in the case of a labial f,v or a dental t,θ,ð, and r + j. Velars undergo a palatalisation process, and are excluded: xoráf-ja> xoráfk'a, karáv-ja >karáfk'a, lá δ-ja >láθk'a, xérja> šérka. However, cases with a labial stop p+j surface as pk': kup-já >kupk'a, with preservation of the input stop and an SS pattern. The present cases have clear synchronic alternations, seen in the plural formation of neuter nouns in -i, or in passive verbal forms: patjéme> paθk'éme, but ayap-jéme>ayapk'éme. From the above cases clusters of r+ stop or fricative clearly exhibit heterosyllabicity even under the Onset Maximization Principle. Such a cluster is not found word initially, although the other clusters discussed may. However for all these clusters we assume heterosyllabicity (for more on syllables in Cypriot see Drachman & Malikouti-Drachman1997, Malikouti-Drachman 2001)

4.2 Repairs and a Problem

Although Morelli's proposal aims at tautosyllabic clusters (but cp. 3.2 above), her proposal still applies to Cypriot repairs successfully. However, cases of a stop labial+ j cluster, as seen below, are problematic.

Take first neutralisation of an FF pattern to FS. In the FF pattern of voiced continuants the IDENT (cont) constraint dominates the OCP (+cont) constraint, which militates against an FF cluster, so that an FF input surfaces (cp. Morelli 1999: 63,85, 1998:10). Thus for /avjó/ surfacing as avjó in SMG the ranking is:

OCP (-cont), *SO >> IDENT (cont) >> OCP(+cont)

Assuming that the same lexical input holds between SMG and Cypriot, the different pattern of these two systems is obtained by reranking of the IDENTITY (cont) constraint and the OCP (+cont) constraint in Cypriot, thus the ranking of the unmarked FS pattern, as in SMG, is obtained: OCP(+cont), OCP (-cont), *SO>> IDENT(cont)

Now consider the second case of a Cj cluster with neutralisation a) of an FF or b) an SF pattern to an FS one.

a) FF >FS kaláθ-j- a> kaláθ k'a, peðjá> peðg'á. For the FF pattern the repair is as above.

b) SF>FS: mmátin – mmátja> máθ k'a, but: kupín-kupjá> kupk'á.

An SF pattern has the ranking:

OCP(+cont), OCP (-cont) >> IDENT(cont)>>*SO (cp. Morelli 1999:50).

For this pattern to be repaired to an FS one, the constraint *SO must now dominate the IDENT (cont) constraint, so that the ranking of the unmarked FS pattern is obtained, as in the tableau below. The added constraint AGREE (voice) demands that obstruent clusters should agree in voicing (Lombardi, 1999:272).

/mmát-ja/	AGREE, OCP(+cont), *SO, OCP (-cont) >> IDENT (cont)
1.mmát-ja	*! √ * √ √
2.mmát-x'á	√ √ * √ √
3.mmát-k'á	√ √ * * *
☞ 4.mmáθ-k'á	√ √ √ √ *
5. mmáθ-x'á	√ * √ √ *

The optimal output is the form 4) mmáθk'á which violates only the lower ranked faithfulness constraint IDENT (cont).

However, in the case of a cluster of a labial stop +j the input pattern SF surfaces as SS as in kup-já > kupk'á and not as FS. For this exception first a faithfulness constraint like IDENT [p] is required dominating both constraints, *SO and OCP (-cont), to assure that the last segment of the stem -p- will surface as a stop and not as a continuant, which an FS pattern demands⁷. But still a problem remains. It seems that the constraints OCP (-cont), OCP (+cont) and *SO, as formulated, cannot distinguish between the two candidates: the wrong form for Cypriot kupx'á and the correct form kupk'á. Cp. the tableau:

/kup-já/	AGREE, IDENT [p], OCP, *SO, OCP >> IDENT (cont)
	(+cont) (-cont)
1.kupjá	*! √ √ * √ √
☞ *2.kupx'á	√ √ √ * √ √
3.kupk'á	√ √ √ * * *
4.kufk'á	√ * √ √ √ *

Even by reranking the constraints the form 3) kupk'á is less harmonic than the form 2) kupx'á, since the form 3) kupk'á, apart from IDENT (cont) also violates the OCP(-cont), in contrast to the wrong form kupx'á.

A way out it would be for the *SO constraint to forbid only a fricative as a second member of the cluster. In Morelli's proposal, the *SO constraint covers both cases of obstruents, either a stop or a fricative, and is grounded "both phonetically and phonologically. Phonetically, it reflects the preference for stops to be released into more sonorous segments. Phonologically it allows us to assign SS clusters a proper superset of the marks assigned to SF clusters

and thus derive the ordering SF> SS” (1999: 48, with reference to Steriade 1994). However, if a modification of this constraint so that it applies only to fricatives is not possible, a way out for Cypriot and other parallel dialects could be to admit a further constraint demanding the “STRONG ONSET”, proposed above (2.2), dominating the *SO and the OCP(-cont) constraint. Thus, evaluating only the crucial forms with the relevant constraints:

/kup-j-á/ IDENT [p], OCP, STR.ONS>> *SO, OCP>> IDENT (cont)						
		(+cont)		(-cont)		
1.kupx'á	√	√	*	*	√	√
☞3.kupk'á	√	√	√	*	*	*
4.kufk'á	*!	√	√	√	√	*

Now form 3) kupk'á is more harmonic than form 4) kupx'á, since form 4) violates a higher constraint. The constraint STRONG ONSET we have proposed, can be properly formulated in the constraints frame-work inside the theory of Prominence Alignment of Prince & Smolensky (1993: 129, also in McCarthy 2004, 45)

5. Prominence Alignment

5.1 ONSET PROMINENCE

Prominence alignment (Prince & Smolensky 1993: 129), is a general operation “in which scales of prominence along two phonological dimensions are harmonically aligned”. The two scales are aligned as a set of anti-association negative constraints - from worst to best- so that the less harmonic candidat is marked before the more harmonic one and thus loses in the competition. In Prince & Smolensky’s approach there is a fixed ranking and each constraint may refer to a step of the scale⁸. In this theory, “each step in the scale is a separate constraint, which can be evaluated in a binary yes /no fashion. More importantly, other constraints can be interleaved within the sonority hierarchy” (Kenstowicz 1996 in Mc Carthy, 2004: 192 and ROA 33).

Our proposal is to extend this theory to the SE dialects so that the two scales of prominence to be aligned are the prosodic dimension, which concerns prominence of the structural position Onset (O) > Coda (C) taken together with the dimension concerning inherent prominence of the segments as registered by their values on the Sonority hierarchy⁸. The two dimensions of prominence are:

i. Onset > coda

ii. a > i, ... v, δ, j, γ > f, θ, x > b, d, g > p, t, k

We thus have for Cypriot the following constraints, extracting this part of the Sonority scale, which concerns non-strident stops and fricative obstruents.

*O(NSET) *O / v, δ, j, γ >> *O / f, θ, x >> *O / b, d, g >> *O / p, t, k

*C(ODA) *C / p, t, k >> *C / b, d, g >> *C / f, θ, x >> *C / v, δ, j, γ

Evaluating now the two competitor forms *kupx'á* vs. *kupk'á* under the two crucial constraints we obtain the proper output.:

/kupja/ OCP *O / v, δ, j, γ >> *O / f, θ, x >> *O / b, d, g >> *O / p, t, k >> *SO, OCP >> IDENT(cont)

	(+cont)				(-cont)			
1. <i>kupx'á</i>	√	√	*	√	√	*	√	√
2. <i>kupk'á</i>	√	√	√	√	*	*	*	*

Form 1) is less harmonic than form 2), since it violates a higher constraint. Optimal is the form 2) with the SS pattern surfacing. The *SO constraint loses its importance. The Prominence alignment approach that we propose, allows us to account for further characteristics of Cypriot and related dialects by dividing or interleaving other constraints between the steps of the ONSET PROMINENCE hierarchy. That is the different degrees of onset occlusivisation as well as the asymmetry between prominence of the two prosodic positions coda –onset and place of articulation, which however we will treat in another place.

5.2 Degrees of ONSET PROMINENCE

In the SE dialects the output of OCP and ONSET PROMINENCE in the case of the voiced continuant clusters *vδ / γδ*, *vγ*, *rδ / rγ*, as well as *vj / δj* clusters, discussed above, can be either a voiced or a voiceless cluster. Voice variation is not reported for the corresponding voiceless clusters or clusters with voiceless C₁. Thus, in Xíos the voice distinction of the FS clusters is kept distinct: e.g.

pj > *pk'*, *fj* > *fk'* but *vj* > *vg'*, *δj* > *δg'*, *rj* > *rg / rg'* correspondingly.

Notice the relation between the voice distinction of the cluster and the voiceless – voiced type of C₁, which is also the final segment of the stem. In Kos, the voice distinction is also kept, but a cluster tj -with unmarked dental- has the voiced output δg' (Newton 1972b: 167), whereas the corresponding marked labial p segment is spared: pj> pk', a topic to be discussed elsewhere. In Cyprus, the output of all these voiceless as well as voiced clusters is a voiceless cluster, thus not only pj> pk', fj> fk' but also vj> fk', δj > θk', rj> rk/rk' correspondingly: xoráfin-xoráfk'a vs. kará (v)in -karáfka. The voiceless forms are characteristic of central Cyprus, and it seems that they are taken over in today's Cypriot Koiné. However, in central Pafos- there is an alternation between voiceless and voiced obstruent clusters (Newton 1972a 100,192), as in the dialects of Xios and Kos above: avgón ~ afkón, ravdín ~ raftín, evdomá(δ)a ~ eftomá(δ)a, as well as v+j, δ+j: vúdǵ'a ~ vúθk'a, póδǵ'a ~ póθk'a, peδǵ'a ~ peθk'a. From this area also clusters with mixed voiced consonants are reported like vk', δk'. (Cp. also the variants máδǵ'a – máδja Newton 1972b:165).

Since a voiceless stop is considered to be the best onset, we would expect in these SE dialects, where the ONSET PROMINENCE constraint is active, to have only a voiceless stop as an onset. And this is what we find for a voiceless input for which the only possible degree of strengthening is the maximal occlusivisation to a voiceless stop. On the other hand, the voiced fricatives seems to be strengthened either to the corresponding voiced stops b-d-g or to the voiceless stops p-t-k, thus obtaining a maximal occlusivisation as well. These alternations may be due to the intervention of other constraints. This accounts for the fact that variation is shown only in the case of voiced clusters, where blocking of ONSET PROMINENCE is possible. We formalize these facts by reranking two constraints: the morphological constraint we saw for N. Rodos (2.2 above), the IDENT_{root}(voi) constraint demanding Faithfulness to the voice of the final segment of the stem and the ONSET PROMINENCE constraint. By intersecting and reranking the IDENT_{root}(voi) constraint between the two micro-constraints consisting of the two steps of the ONSET PROMINENCE hierarchical constraint - that is the voiced and voiceless stops - we may account for the proper output. Thus taking only the relevant constraints:

/peδjá/	AGREE, OCP (+cont), IDENT _{root} (voi) >> *O/b,d,g >> *O/p,t,k				
1. peδ já	√	*	√	√	√
2. pe δǵ'á	√	√	√	*	√
3. pe δk'á	*	√	*	√	*
4. pe θk'á	√	√	*	√	*

The form 2) $\text{pe}\delta\text{g}'\acute{\alpha}$ is the winner, since it satisfies the higher $\text{IDENT}_{\text{root}}(\text{voi})$ constraint, while form 4) $\text{pe}\theta\text{k}'\acute{\alpha}$ violates it and thus loses the competition. The other forms 1) and 3) violate higher constraints and are thus excluded.

To account for the variant $\text{pe}\theta\text{k}'\acute{\alpha}$ the $\text{IDENT}_{\text{root}}(\text{voi})$ constraint is ranked lower, after the $*\text{O}/\text{b},\text{d},\text{g}$ constraint so that the form $\text{pe}\delta\text{g}'\acute{\alpha}$ is not protected and the competitor 4) $\text{pe}\theta\text{k}'\acute{\alpha}$ wins. Cp. the tableau below with relevant constraints.

$/\text{pe}\delta\text{j}\acute{\alpha}/$	AGREE, OCP(+cont)	>> $*\text{O}/\text{b},\text{d},\text{g}$	IDENT _{root} (voice),	$*\text{O}/\text{p},\text{t},\text{k}$
1. $\text{pe}\delta\text{j}\acute{\alpha}$	√	*	√	√
2. $\text{pe}\delta\text{g}'\acute{\alpha}$	√	√	*	√
3. $\text{pe}\delta\text{k}'\acute{\alpha}$	*!	√	√	*
☞ 4. $\text{pe}\theta\text{k}'\acute{\alpha}$	√	√	√	*

In this tableau the winner is now form 4) $\text{pe}\theta\text{k}'\acute{\alpha}$. Form 2) violates a higher constraint. The ranking between the $\text{IDENT}_{\text{root}}(\text{voi})$ and the $*\text{O}/\text{p},\text{t},\text{k}$ is indifferent, since both are violated by the form 4).

For the voiceless clusters of these dialects, since $\text{STEM IDENT}(\text{voi})$ does not conflict with the voiceless output, the ranking of both tableaux above may hold. On the other hand for Cypriot, with no voice-variation at all, the ranking is like the one of the last tableau above, with unvoicing of the input voiced segments⁹, so that the optimal onset with a voiceless stop is obtained. In both cases further variants with changes in voicing and continuancy are due to further intervention of the above or other relevant constraints. As an example for the forms with mixed voice clusters: vk' , $\delta\text{k}'$ both constraints $\text{IDENT}_{\text{root}}(\text{voi})$ and AGREE are ranked below the ONSET PROMINENCE constraint, with $\text{IDENT}_{\text{root}}(\text{voice})$ dominating the $\text{AGREE}(\text{voice})$ constraint, so that the adequate form with a mixed-voice cluster surfaces.

6. Conclusions

In order to account for manner dissimilation in a group of SE dialects we proposed the addition of a hierarchical sonority driven constraint. It remains to be seen how far such a constraint can account for data from other Greek dialects as well.

7. Notes

1. The dental loss before a strident indicates an OCP on coronality.

2. We thus accept here an allomorphy $i \sim j$, e.g. neuters: sg.-i ~pl. j-a, avoiding a more abstract derivational account of an unspecified segment followed by

semivocalisation and consonantalisation (cp. earlier accounts in Malikouti-Drachman & Drachman 1990, Malikouti- Drachman 2001). Since an OT approach avoids derivations by looking directly at the output, the allomorphy *i~j* is preferred. Of course as a consequence the segments /i/: /j/ must be opposed in the lexicon noting that stem forms like *px'ós*, *djó* do not show alternation, and thus do not contradict this proposal.

3. See also an analysis of consonant “strength“ in terms of an acoustic salience in Jun (1995).

4. It seems, then, that Kappa’s conclusion – based, of course, on Morelli’s classification- that the W.Cretan dialect is more marked than M. Greek, is not correct. If the W.Cretan dialect got rid of the SF pattern of SMG, it moved not to a more marked pattern, but to a less marked one (On this point see also Malikouti-Drachman 2001, based however on a syllabic account).

5. An argument for the tautosyllabicity of Cy cluster in SMG as against the heterosyllabicity of this cluster in other dialects, such as the SE dialects, is that in cases of a triconsonantal cluster like C1C2+j: *xartí* - *xartx'a* all three segments surface in SMG, whereas in SE dialects like Cypriot one consonant (the second one here) is lost. C1C2+j: *xartí* - *xark'a*. This is due to two constraints in Greek: *COMPLEX CODA: a complex coda is not allowed, and ONSET COND: no more than two consonants are allowed under onset.

6. A similar faithful constraint is required for the W. Cretan dialect in Kappa 2001.

7. A variant approach is the Stringency Hierarchy theory as in de Lacy (2002, 2004).

8. Alignment of the structural positions Onset and Coda with the Sonority Hierarchy is also used in Gnanadesikan (2004) to account for language acquisition. Gouskova (2004) extends the same type of Alignment not simply to penalize occurrences of particular onsets and codas, but to account for relation-constraints between Coda and Onset in Syllable Contact.

9. Notice that a constraint like *LAR: do not have Laryngeal features (Lombardi, 1999:271) or AVOID VOICED OBSTRUENTS (Lombardi, 1995) can also account for the lack of voice distinction in Cypriot, provided that it is constrained to stops, since continuants do have distinctive voice. Cp. the parallel phonotactic condition for stops in Cypriot given in Newton (1972a), which we adopted in Drachman & Malikouti-Drachman (1997).

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9. Περίληψη

Ο στόχος της παρούσας ανακοίνωσης είναι να δείξει ότι στην Ν.Ε η αφομοίωση του τρόπου (άρθρωσης) ρυθμίζεται από το φωνολογικό βάρος, το οποίο αντιμετωπίζουμε ως μια σχέση περιορισμών πιστότητας και μαρκαρίσματος. Αναθεωρείται η ερμηνεία της αφομοίωσης του τρόπου άρθρωσης που είχε προταθεί από τους Drachman & Malikouti-Drachman (1997) καθώς λαμβάνεται υπόψη η ανάλυση του Morelli (1998, 1999) για τα Ελληνικά. Προτείνεται ότι προκειμένου να ερμηνευθούν οι αλλαγές του σχήματος (Κ)λειστό (Τ)ριβόμομο στην ΚΝΕ στο αντίστοιχο σχήμα TK και KK στα Κυπριακά και σε άλλες ελληνικές διαλέκτους, είναι απαραίτητος άλλος ένας περιορισμός. Αυτός είναι η «Υπεροχή της συλλαβικής έμβασης» (“ONSET PROMINENCE”) ένας ιεραρχικός περιορισμός ηχηρότητας που βασίζεται στην «Ευθυγράμμιση με το εξέχον στοιχείο» (“PROMINENCE ALIGNMENT”) των Prince & Smolensky (1993).