A Non-Bleeding Rule in Modern Greek*)

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Sakellariades 1985 (*Glotta* 63) proposes two synchronic phonological rules for northern Modern Greek dialects, Glide Formation (GF) and High Vowel Deletion (HVD), and suggests GF as „a characteristic case of a bleeding rule". Closer examination, however, shows that S's formulation of HVD is flawed, and that the rule's environment must refer to the need for consonants adjacent to the vowel. Evidence from a Thessalian dialect (Tírnavos) is crucial to this reformulation, which results in HVD's interaction with GF not being a bleeding order. Additionally, corrections are offered to other claims S makes about these rules.

Sakellariades (1985) presents a putative case of a bleeding rule from the phonology of the northern dialects of Modern Greek. The rule in question is a glide-formation rule by which /i/ → [j] next to a vowel. This rule, he claims, bleeds the well-known northern dialect rule deleting the high vowels /i/ and /u/ when unstressed, for the former rule eliminates the opportunity for the latter to apply.[1]) Thus, in [ðjó] 'two' from /ðió/, according to Sakellariades, glide-formation has turned the unstressed /i/ into [j], thereby preventing high-vowel deletion from applying to delete the underlying /i/. In this note, I wish to clarify a few points regarding the nature of these rules and thereby challenge the assertion that the relationship between them "constitutes a characteristic case of a bleeding rule" (p. 113).

From the standpoint of phonological theory, such a reevaluation of this proposed ordering relationship is appropriate. Bleeding orders are almost always marked or unnatural orders synchronically, as Kiparsky (1968, 1971) notes, so that it is desirable, if possible, to eliminate the need for them in any grammatical description. This statement holds, moreover, even in more recent theories of phonology, e.g. the "lexical phonology" of Kiparsky (1982), in which at

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[1]) A similar observation was actually made by Newton (1972: 34–5), though his concern there was the historical order of the rules, not their synchronic ordering.

A Non-Bleeding Rule in Modern Greek 125

least some ordering relationships between rules per se have been replaced by orderings based on the segregation of rules into distinct levels specifying domains of application.

More important, the relationship between rules is really a function of not what the rules do so much as how they are formulated. The following reanalysis illustrates this point: suppose that instead of formulating the /ðió/ → [ðjó] derivation as involving a glide-formation rule, as given above, the relevant rule were to be formulated as a glide-insertion rule (i.e. ∅ → j/i__V). With such a rule, /ðió/ would become [ðijó], and from that stage in the derivation, high-vowel deletion could apply to produce the expected output [ðjó]. Under such a formulation, then, the glide-creation process would not bleed high-vowel deletion and in fact would preserve the opportunity for it to apply to the high vowel of the underlying form.

Such a glide-insertion approach to the facts of the nothern dialects probably cannot be maintained, and in any case, need not be.[2]) This suggested reanalysis should make it clear, however, that what is crucial to the determination of an ordering relationship is the proper formulation of the rules involved.

With this point in mind, the facts that Sakellariades puts forth in support of his claim can be reexamined. While there are undoubtedly numerous words affected by high-vowel deletion not only in the Euboea dialect he describes but also all throughout the northern dialects,[3]) all of the examples he cites and similar ones from all over the northern dialect zone show high-vowel deletion only when the vowel is between consonants or between a consonant and a word-boundary and, significantly, never when it is adjacent to another

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[2]) Although this glide-insertion approach should not be insisted upon for the Euboea data cited by Sakellariades, it is worth pointing out that there is some basis for not rejecting it out of hand. Newton (1972: 55–6) points out that there are some dialects, including northern ones, which have, for instance, [kríjo] or [krijó] from /krío/ 'cold', with an epenthetic palatal glide between /i/ and a back vowel (though admittedly, in the case of deriving [krijó], he opts for an account of this phenomenon as a development from an intermediate stage after glide-formation, i.e. from [krjó]).

[3]) It is worth noting that the underlying forms that Sakellariades assumes derive essentially from historically antecedent forms or from a comparison with the standard language; in some instances, though, there are genuine synchronic alternations between stems with stressed high vowels and parallel vowelless forms with stress not on the stem that motivate the high-vowel deletion rule, e.g. [pín-a-mi] 'we were drinking' (Standard Modern Greek [píname]) versus [é-pn-a] 'I was drinking' (Standard Modern Greek [épina]).

126   Brian D. Joseph

vowel. Thus instead of Sakellarides' formulation of the high-vowel
deletion rule, given in (1):

1.   + voc   → Ø / __
         — cons   [—stress]
         + diff

it would seem that the proper formulation of the rule should men-
tion the necessity for a surrounding consonantal/boundary environ-
ment, as in (2):

2.   + voc   → Ø / C __ C
         — cons   #   #
         + diff   [—stress]

With such a rule, there is no interaction between the high-vowel
deletion rule and Sakellariades' glide formation rule, for they apply
in complementary environments: vowel deletion never applies next
to a vowel and glide-formation applies only next to a vowel. The
putative bleeding relationship between these rules therefore disap-
pears.

Admittedly, two factors limit the availability of relevant forms by
which this formulation of high-vowel deletion might be tested: the
rarity of vowel hiatus in general with inherited high vowels[4]) due
among other things to various processes of contraction,[5]) and the
glide-formation process itself described by Sakellariades. Still, most
linguists who have investigated this northern dialect phenomenon
have assumed that high-vowel deletion is conditioned in the manner

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[4]) Most northern dialects have some ·forms with surface hiatus of [i] or [u]
before a vowel, resulting from the raising of underlying /e/ and /o/ when
unstressed, a typical example being [zuí] 'life' (Standard Greek [zoí]; these
forms are not entirely irrelevant to questions concerning the conditions (i.e. pre-
vocalic or not) for the deletion of i/u – even though discussion of the deletion
rule generally focus on underlying /i/ and /u/ — for many of the northern dia-
lects evince forms in which a secondary i/u created by raising is deleted (*pace*
Sakellariades' footnote 1). For example, Tzartzanos (1909) cites [xlí] 'bile' for
Thessalia, corresponding to standard Greek [xolí] and thus deriving from /xolí/
by raising, to give [xulí], followed by high vowel deletion. Newton (1972:
189–191) has a discussion of similar forms. It is undoubtedly significant for the
question under examination here that in such forms the deleted vowel seems
always to occur between consonants and never adjacent to a vowel.

[5]) See Newton (1972: 41–52) for a discussion of vowel contraction historically
in Modern Greek.

just described.[6]) Moreover, a few – admittedly somewhat rare – forms in various Northern dialects can be found that show retention of an unstressed underlying high vowel[7]) next to another vowel.[8]) One especially telling example comes from the Thessalian dialect of Tírn-avos, from the detailed (and reliable) description of Tzartzanos 1909. In particular, in this dialect, a feminine noun [kukuǽva] 'owl' occurs, with unstressed [u] retained before the vowel [æ] (a Thessalian innovation[9])); moreover, the pretonic [u] in [kukuǽva] is clearly an underlying /u/, and not a raised underlying /o/, for the masculine counterpart of [kukuǽva] is [kukúævus], where the different stress placement reveals a stressed vowel [ú] before [æ].

The facts concerning high vowel deletion in the various northern dialects do show some minor differences from region to region, so it is possible that the retention of [u] adjacent to a vowel in Tírnavos may not be found in all northern dialects. Still, such an example, especially when coupled with the fact that the preponderance of

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[6]) Newton (1972: 44), for instance, explicitly states that "high vowel loss does not normally occur before vowels," and the discussion in the literature (see Newton pp. 183 ff. for a summary account) of possible constraints on high vowel loss based on the "unpronounceability" (so, for instance, Sakellariades in his footnote 1) of consonant clusters that might result from high vowel deletion certainly presupposes a consonantal environment for the deletion rule.

[7]) Admittedly, the vowel in these forms is [u] and not the /i/ Sakellariades writes into his glide-formation rule; still, under the most general formulation of the rule in which it would by default apply to any high vowels, front or back, these forms are noteworthy and are the only relevant forms available.

[8]) There are some forms in a variety of dialects not restricted to the north which show the results of the loss of earlier unstressed high vowels before another vowel, e.g. the widespread φλεβάρης 'February' from earlier φεβρουάρ-ιος or σώπα 'be quiet' from σιώπα. These forms, if not the result of morphological reshapings or vowel contraction, might well show high vowel deletion before a vowel, but – importantly – only as a diachronic phenomenon; there are no examples in which pre-vocalic high-vowel loss is a synchronic phonological phenomenon. Thus such forms do not constitute counterevidence to the proposed reformulation of the high-vowel deletion rule, and the ensuing negation of Sakellariades' bleeding order, for they do not bear on the synchronic phonology of these dialects. Moreover, it is worth noting that even if they are taken to bear on the ordering of the rules Sakellariades treats, what they show is an ordering that is the reverse of what he posits, with a pre-vocalic high vowel deletion occurring before (and in fact bleeding) glide formation.

[9]) Even though Tzartzanos writes ‹εα› for this vowel and points out that one of the historical sources of this vowel is the sequence ε plus α, it is clear from his description that ‹εα› is not a diphthong but rather is the low front vowel (æ), since he says (p. 14): "ὁ ... φθόγγος εα ... κεῖται μεταξὺ τοῦ ε καὶ τοῦ α".

examples evincing high vowel deletion all involve consonantal contexts, places the burden of proof on those who would claim that the deletion rule is blind to the nature of the immediately adjacent segments. Accordingly, it may be concluded that the interaction of glide formation with high vowel deletion is not the bleeding order suggested by Sakellariades, but rather, upon closer examination, is instead a non-bleeding – and in fact non-interactive – order.

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