Stem Alternations in Swiss Rumantsch

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The present paper continues an extended conversation with Martin Maiden (Anderson 2008; Maiden 2008; Anderson 2010, 2011; Maiden 2011) about the analysis of stem alternations in one form of Swiss Rumantsch, Surmiran as spoken in the area of Savognin and the surrounding communities. Over time, our analyses have shown some convergence, but important differences remain. Some of these, such as the status of the verb dueir (viewed as defective by me, and as suppletive by Maiden) will not be addressed here, because there are no new facts available, and Maiden and I simply disagree on some points in the interpretation of what is known.

My intention here is to provide some further context and interpretation in support of the analysis I have offered in previous work, suggesting (a) that the corresponding facts in other Swiss Rumantsch languages call for an analysis similar to that which is motivated for the Surmiran of Savognin; and (b) that some additional additional facts from forms of Rumantsch provide additional support for that analysis and do not undermine it as Maiden suggests.

1 The Story So Far: Surmiran Stems (Anderson 2011)

The stems of many verbs (nearly all, on the analysis being defended here) in the Surmiran of Savognin and related areas in the valley of Julia in Graubünden display an alternation between two distinct phonological shapes. The facts concerning this pattern have been
presented in previous papers (Anderson 2008, 2010, 2011); the data are not in dispute, and will not be rehearsed again in detail here. Representative alternating verbs include ludar [lu’dar] ‘to praise’, 3SG loda [’lodɔ]; entrar [an’trar] ‘to enter’, 3SG aintra [’aintra]; vurdar [vur’dar] ‘to watch’, 3SG varda [’vardɔ], etc.

1.1 Stem Alternation: The Basics

Let us refer to the two stem shapes associated with a verb “Stem 1” and “Stem 2” for the moment. For the verb ludar, for example, Stem 1 is /lud-/ and Stem 2 /lod/; for entrar, /atr-/ and /aintr-/; for vurdar, /vurd-/ and /vard-/ etc. One of these stems (“Stem 1”) appears in one set of morphological categories of the verb: in the 1,2pl of the Present Indicative, throughout the Imperfect, the Future, and the Conditional, as well as in the 2pl Imperative and the Present and Past Participles. The other (“Stem 2”) appears in a complementary set of categories: in the 1–3Sg and the 3pl of the Present Indicative, plus the entire Present Subjunctive and the 2sg of the Imperative. The infinitive is generally based on “Stem 1” as illustrated by the verbs cited above, but verbs of the type descended from the Latin third conjugation have “Stem 2” in the infinitive instead: e.g. discorrer [dis’kor] ‘speak’; 1sg Present dis’cor; 1pl Present discur’rign.

Although grammatical descriptions of Surmiran such as (Signorell et al. 1987; Thöni 1969) imply that ‘alternating’ verbs are a limited class, once we consider differences of vowel quality, it is reasonable to say that ‘regular’ verbs also have two stems, although the two are not distinguished orthographically. The stem of cantar ‘to sing’ for example appears as /kant-/ in just those environments where “Stem 1” is called for, and as /kant-/ in those calling for “Stem 2”.

Although the differences between the two stem shapes can often be reconstructed as based on predictable and purely phonological regularities in earlier stages of the language, the alternations between “Stem 1” and “Stem 2” are not simply a matter of phonology today, because it is not possible to predict either stem from the other. For any given vowel
quality appearing in “Stem 1” the vowel of the corresponding “Stem 2” can have any of a number of different qualities, and vice versa, such that it is impossible to predict either stem from the other in the general case.

In the majority of instances, the difference between the two stems rests on different qualities of a single vowel, but other patterns characterize many verbs, including some consonantal differences (e.g. s’anclinar ‘to bend’, 3SGPRESIND s’anclegna), variation in more than a single vowel (e.g. misirar ‘to measure’, 3SGPRESIND maseira), and vowel/∅ alternations (e.g. luvrar ‘to work’, 3SGPRESIND lavoura). These patterns reflect the complex interplay of a variety of phonological changes in the histories of individual words, changes that are now quite opaque from the point of view of the language’s synchronic phonology.

The set of circumstances in which “Stem 2” is found as opposed to “Stem 1” is of course reminiscent of what Maiden, in a series of studies of a variety of Romance languages, has called the “N-pattern” (modified to include the infinitives of original Latin third conjugation verbs, and expanded to include the entire Present Subjunctive rather than just the singular and third person plural). With this pattern in mind, Maiden (2011) argues that we should continue to consider the distribution of these stem alternants as defined in morphological terms. The “N-Pattern” (or the particular variant we see here) is a morphome, a purely morphological construct whose unity is not based on a coherent phonological, morphosyntactic or semantic definition but rather functions solely in the morphology.

Such an analysis has been shown to be plausible and motivated for similar stem alternations in several Romance languages, but in the present case there is a straightforward alternative. Although the alternations cannot be (synchronically) reduced to the operation of phonological rules in the language, there is nonetheless a clear phonological factor which differentiates the environments in which the two variants of each stem occur: ‘Stem 2’ occurs when main stress falls on the stem, while ‘Stem 1’ occurs when main stress falls on a desinence.

As argued in previous papers (Anderson 2008, 2010, 2011) stress in Surmiran is
phonologically predictable (apart from some vocabulary borrowed from German and treated as synchronically foreign) on the basis of the rule in (1).

(1) **Stress:** Main stress falls on the penult if the rhyme of the final syllable consists of [ə], possibly followed by [r], [l] [n] or [s]. If the final rhyme contains a non-ə vowel, or [ə] followed by some other consonant, the main stress falls on this syllable instead.

The verbal forms calling for “Stem 1” are precisely those whose endings contain a syllable attracting stress by this rule, while those calling for “Stem 2” are just those with no such syllable in the ending, allowing stress to retract onto the stem. Accordingly, it seems reasonable to refer to the stem alternants as the “unstressed stem” as opposed to the “stressed stem” rather than as the less informative “Stem 1” vs. “Stem 2’.”

The distinction between the presence and the absence of stress in Surmiran has consequences for the range of vowels found in a syllable. Stressed syllables can contain a variety of full vowels (long and short) and diphthongs. Unstressed syllables, in contrast, generally contain only short [ə] (written a or e), [i] (i) or [u] (u), though unstressed [ɛ, ɔ] are not rare. We can formulate the relation between stress and vowel quality as a system of constraints, as in (2).

(2) **Constraints:**

a. Avoid stressed [a,i,u].

b. Avoid unstressed [a,i,u] (as well as unstressed long vowels and diphthongs).

c. Avoid unstressed short mid-vowels (ranked lower than those above).

Ranking: **Stress ≫ a, b ≫ c**

Verbal stem alternations reflect these facts about the distribution of vowels, in that the vocalism of the stressed stem will contain an appropriate vowel in the position where stress can fall, while the corresponding unstressed stem will generally have a different vowel (drawn from the set of those possible in unstressed syllables) in the corresponding position.
Unstressed stem [e] and [o] commonly either (a) alternate with long stressed (open or closed) similar mid-vowels, or else (b) do not alternate, belonging to the class of verbs in esch (see the discussion of this pattern below). Roughly two dozen verbs (out of several hundred) with stressed [ε] or [ɔ] show an unstressed vowel with the same quality, while in a few verbs, unstressed [e] alternates with [ai] or [ei].

On this basis, the description of the stem alternation system is straightforward. The lexical representation of a given verbal stem has two phonological shapes, one of which is suitable for having stress placed on it, and the other of which is suitable for remaining unstressed. In the latter of these the last vowel in the representation is drawn from the set [o, i, u] (ignoring the case of mid vowels, which is more complicated but not fundamentally different), and in the former the last vowel is a full vowel or diphthong. Verbal desinences, similarly, have a phonological shape which either attracts stress or fails to do so. The morphology then combines the (complex, bipartite) representation of a stem with the representation of an ending, and the constraint system eliminates one or the other potential stem shape on the basis of the degree of well-formedness of the two alternatives. An example of how this works is provided by the tableaux for the infinitive and 3SG Present indicative forms in (3).

(3) vurdar ‘watch’, 3SG. varda = {/vurd/, /vard/} + /-ar/ or /-a/

<table>
<thead>
<tr>
<th></th>
<th>Stress</th>
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<tbody>
<tr>
<td></td>
<td>*u, i, o</td>
<td>*ä, i, ü</td>
</tr>
<tr>
<td></td>
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<tr>
<td>vurdar</td>
<td>!*</td>
<td>*</td>
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<tr>
<td>vardar</td>
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<tr>
<td>vardăr</td>
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<tr>
<td>vér'dar</td>
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<td></td>
</tr>
<tr>
<td>văr'dar</td>
<td></td>
<td>!*</td>
</tr>
</tbody>
</table>
1.2 The Augment -esch

Related to these matters is the presence or absence in certain inflected verbal forms of the stem extension -esch, comparable to elements found under similar conditions in other Romance languages (e.g., the -isc in Italian fi’nisco from finire, cf. finiamo ‘I/we finish’), illustrated in (4).

(4) gratular (\[gratu’lar\]) ‘beat, shake’

1sg   ,gratu’lesch
2sg   ,gratu’leschas
3sg   ,gratu’lescha
1pl   ,gratu’lagn
2pl   ,gratu’lez
3pl   ,gratu’leschan
1sg Pres. Subj.  ,gratu’lescha

A substantial number of Surmiran verbs show this -esch, precisely in those forms of the finite paradigm where the stressed stem would be called for. My account of this posits the semantically vacuous rule of finite inflection in (5).

(5) /X/ \rightarrow /X\_ef/ \[+\_VERB\]

(limited to tensed first and fourth conjugation verbs)
Since the marker introduced by this rule does not serve to express any of the semantic or morphosyntactic content of the form, it should normally be seen as producing a violation of the natural condition in (6).

(6) **Depₘ**: (Introduced) phonological material in the output should be the realization of morphological content in the Input.

However, the application of rule (5) is not pointless. Since it has the effect of introducing stress-attracting phonological material precisely where stress would otherwise fall on the stem, a consequence of its operation is that verbs with which it appears never show any alternation in the stem shape: the unstressed stem (augmented with -esch exactly where necessary) will always be phonologically appropriate.

Verbs that take the -esch augment can thus be lexically listed with only a single stem, one whose shape is such that the vowel on which stress would otherwise fall in stem-stressed forms is one that should not be stressed according to the constraints in (2). Under exactly these circumstances, the violation of (6) which the introduction of -esch by rule (5) produces is less serious than the violation of the constraints in (2). This implies the constraint ranking in (7).

(7) \((2a, b, c) \gg \text{Depₘ}\)

As a result, the application of rule (5) is sanctioned exactly where its operation will avoid the occurrence of stress on a vowel that resists stress in a verb whose lexical representation does not provide an alternative stressable shape for this purpose.

Rule (5) is restricted to finite forms of verbs from two of the six conjugation classes of Surmiran, and so can be said to involve morphological conditions. Maiden (2011: 45) argues that the appearance of -esch is thereby morphologically determined, but I would emphasize that the conditions on this rule have nothing to do with the ‘N-pattern’ or any other morpheme. The apparent ‘N-pattern effects’ follow entirely from the phonology of stress and its relation to vowel quality.
1.3 Stem Alternations Beyond the Verb

Important evidence that the patterns of stem alternation just discussed cannot be tied to a morpheme defined by a set of morphological categories of the verb is provided by that fact that the same alternations are found robustly in virtually all word classes in the language as a consequence of derivation. Across the lexicon, stems with shapes characteristic of the stressed stems of verbs appear when stress falls on them, but when derivation has the effect of shifting stress away from the stem, a different shape appears, one whose form is that characteristic of the unstressed verbal stems. The examples in (8) illustrate the fact that in general, when the stem of a verb is used as the basis for such derivation, the alternations that appear are the same as those arising within the paradigm of the verb involved.

(8) a. *burscha’nar* ‘brush’ 3sgPres. *bar’schunga*
   *bar’schung* ‘brush (N)’; (la) *burscha’ned* ‘(process of) brushing’

b. *cuglia’nar* ‘swindle’ 3sgPres. *cu’gliunga*
   *cu’gliung* ‘swindler’; (la) *cuglia’nada* ‘(act of) swindling’

c. *gut’tar* ‘to drip’ 3sgPres. *’gotta*
   ’got ‘drop (N)’; *gu’tella* ‘drip (N), (eye)drop’; *gutta’rada* ‘sudden snow-melt’

d. *li’ier* ‘to bind, tie, combine’ 3sgPres. *’leia*
   ’*leia* ‘union, alliance’; *leiabar’schung* ‘brush-binder’; *lia’deira* ‘(ski) binding’; *li’om*
   ‘string; garter’

e. *’neiver* ‘to snow’ 3sgPres. *’neiva*, PP. *na’via*
   ’*neiv* ‘snow’; *na’vaglia* ‘big snowfall’; *na’vada* ‘(lots of) snow’

f. *tschur’rar* ‘to curl, frizz’ 3sgPres. *’tschorra*
   (erva) *’tschorra* ‘curly mint, *Mentha spicata* var. *crispa*’; *tshcur’richel* ‘curl (N)’;
   *tshcur’riglia* ‘crumpled, as slept-in clothes’
g. *tuffar* ‘to stink’ 3sgPres. *toffa*
   ‘tof ‘fart’; *tuffous ‘stinky’

   *veiv ‘alive’; *vi*vent ‘one who lives’

In some instances, an alternation appears in non-verbal forms which is distinct from
that appearing in a related verb, as illustrated in (9). The choice of stems is still conditioned
by the location of stress, however, suggesting that related verbs and non-verbs can have
distinct stem sets.

(9) *sua’rar* ‘to smell’ 3sgPres. *savoira*
   *sav’our ‘smell (N)’; *sauv’rous ‘fragrant’

   Non-verbs derived from the same stems as some of those that show the augment
   -esch as described in section 1.2 above show a stem alternation. This suggests that while
   the verb has only a single stem in its lexical entry, the non-verbs are built on a set containing
two stems. Once again, the stem appearing in non-verbs with non-stem stress is the same
as that appearing in the (non-stem stressed) verbal forms, while the other stem appears in
stem-stressed forms of the derived non-verbs.

(10) a. *favo’réir* ‘to favor’ 3sgPres. *favo’resha*
   *fa’voir ‘favor’; *favo’revel ‘favorable’

b. *flu’drar* ‘line (clothing)’ 3sgPres. *flu’drescha*
   ‘flodra ‘lining (of an article of clothing)’; *flu’drader ‘one who lines (clothes)’

c. *murti’rar* ‘to torment’ 3sgPres. *murti’resha*
   *mar’toir ‘torment (N), trouble’; *murti’rem, murti’rada ‘torments (coll.)’

d. *sbli’tgier* ‘to bleach’ 3sgPres. *sbli’tgescha*
   ‘sblatg ‘bleach(ed) (N,A)’; *sbli’tgider ‘one who bleaches’
e. *saraman’tar* ‘put s.o. under oath’ 3sgPres. *saraman’tescha* (*sara’mainta* in Sonder & Grisch 1970)

*sara’maint* ‘oath’; *saraman’to* ‘sworn’

f. *tschurriclar* ‘to curl (hair)’ 3sgPres. *tschurriclescha*

[from *tschurrichel* ‘curl (N)’; cf. *tschurrar*/*tschorra* ‘curl (V)’]

The same alternations also appear, again in a way correlating with the location of stress, in some non-verbs for which no corresponding verb exists that could serve as their base (although some of these words serve in their turn as the bases for derived verbs).

(11) a. ‘meir ‘wall’; *mi’raglia* ‘walling, stonework’; *mi’rader* ‘wall-maker’

b. ‘deir ‘hard’; *di’raglia* ‘hardness; *direzza* ‘very hard’

c. ‘freid ‘cold (N, A)’; *far’daglia* ‘great cold’; *far’dour ‘coolness’

*sfar’dar* ‘to get cold’ 3sgPres. *sfreida*; *sfar’dour ‘frost-shower’; *sfardan’tar* ‘to cool (tr.)’ 3sgPres. *sfar’dainta*;

A class of apparent problems for the analysis maintained here is presented by derived words in which the ‘stressed’ stem (identifiable by comparison with a related verb) is found inappropriately in a derived word where it does not in fact have stress. Some examples are given in (12), where the ‘inappropriate’ vowels are underlined.

(12) a. *sa’tger* ‘(to) dry [intr.]’ 3sgPres. *setga*

*setg(a) ‘dry (adj.)’; *setgan’tar ‘(to) dry [trans.]’

b. *preschen’tar* ‘(to) present’ 3sgPres. *pre’schainta*

*preschentazi’un ‘presentation’; *pre’schaint ‘present (Adj)’; *preschainta’maintg ‘presently’

c. *accumpa’agnar* ‘accompany’ 3sgPres. *accum’pogna*

*accumpa’gneder ‘accompanist’; *accumpagna’maint ‘accompaniment’

d. *accuma’dar* ‘adjust’ 3sgPres. *accu’moda*
accumulating 'adjustable' accumulating 'adjustment'

e. 'sfend[sr] '(to) split’ 1plPres. sfan'dagn
    sfan’dia ‘cracked (adj)’; sfen’dibel ‘splittable’

f. dur’meir ‘(to) sleep’ 3sgPres. ‘dorma
    durmi’gliun ‘late riser’ dormul’ent ‘sleepy’

g. anga’nar ‘defraud’ 3sgPres. an’giona
    anga’nous ‘fraudulent’; an’gion ‘fraud (N)’; angiona’reia ‘deceit (coll.)’

Maiden (2011) argues that the existence of such words suggests that stem shape is
not, in fact, correlated with the location of stress, but is rather determined by a complex
of morphological conditions. A closer examination of the facts concerning these forms,
however, shows that this conclusion is unwarranted.

Words displaying such inappropriate stem shapes constitute a decided, and limited,
minority. Note first of all an asymmetry in the set of such forms: all involve the appearance
of a ‘stressed’ stem that does not bear stress. No examples are found of words in which an
‘unstressed’ stem shape appears with stress. Furthermore, all of the words with the ‘wrong’
stem are derived from other full words, and not from basic stems. The bases from which
they are derived are words in which the stressed stem is appropriate, since stress falls on
that stem in the base, but is displaced onto a derivational ending in the more complex
form. This suggests that the appearance of the stressed stem without stress in words such
as those illustrated in (12) results from the fact that this stem was selected (appropriately)
in the construction of the base word, and remains unchanged in other words derived from
that.

This suggests a hypothesis based on the conception of morphological structure as
constructed in a cyclic fashion. On that account, basic, underived lexemes are characterized
phonologically by a pair of ‘stressed’ and ‘unstressed’ stems. The choice of one or the
other stem allomorph takes place on the first cycle to which a stem is subject; once the
stem shape is determined, that decision is not revisited on subsequent cycles. As a result, if the ‘stressed’ base is chosen on the first stem cycle, and this form is subsequently extended by further endings so that the vowel stressed on the first cycle no longer bears stress, the original stem will appear to be inappropriate.³

The distinction suggested here between morphological formations built on the basis of the (two stem) lexical base and those built on existing words is similar to the effect of the “Level I” vs. “Level II” distinction within Lexical Phonology (Kaisse & Shaw 1985; Kiparsky 1982, 1985) and its descendant, Stratal Optimality Theory (Bermudez-Otero forthcoming; Kiparsky 2000) between two classes of morphological formation in English.

One set of these, the “Level I” formations, take roots or basic stems as their input. In such words, phonological material comprising an affix is taken into account in assigning stress, conditioning vowel alternations, etc. Examples include both derivational and (non-productive) inflectional material such as the affixes in (13).

(13) a. –ity (profound, profundity; final, finality), –al, –ous, –th, –ation, –atory, –ize, etc. [Derivational]

b. –t (keep, kept; lose, lost; leave, left; etc.) [Inflectional]

In contrast, “Level II” affixes are neutral, in that they leave their base unchanged. Stress, vowel quality, and other phonological properties of the base are computed entirely in terms of the content of the base itself, and are not altered by the addition of affixal material. Again, both derivational and inflectional formations can behave in this way, as in the examples in (14).

(14) a. –ness (profound, profoundness; final, finalness; etc.), –hood, –er, –ism, –ist [Derivational]

b. –d (heap, heaped; doze, dozed; believe, believed) [Inflectional]
Some instances of –able appear as ‘level I’ affixation and others as ‘level II’. Thus, comparable ‘roughly equal’ is a level I form, while comparable ‘suitable for comparison’ is a level II form. This dual possibility is similar to variation cited by Maiden in some cognate affixes in Surmiran.

In English, stress computed at Level I remains unchanged at later levels of the lexical phonology, while in Surmiran, stress is a predictable property of the surface phonological word, and so is recomputed at later levels. Its presence in an initial formation, however, determines the distribution of vowels and stem shapes, phonological properties that are retained as further affixes are added. This effect accounts for nearly all exceptional stem shapes of the sort illustrated in ([stressed-unstressed-stems]). Since further affixation can only shift stress away from a stem, and not result in the assignment of stress to a syllable that was unstressed on an earlier cycle, this accounts for the asymmetric pattern of anomaly in stem shapes.

The basic point of contention between my account and Maiden’s is whether we should prefer a phonological account of the stem alternations in Surmiran, as offered here, to one based on autonomously morphologized dimensions. However valid the case for such an analysis may be in other Romance languages, I think it is not motivated here.

Maiden’s (2011) preference is to see the two possible stems of a lexeme as distributed on the basis of a “Morphome” (Aronoff 1994): a morphophonological function that does not have a single (or coherent) morphosyntactic value, such as the English “perfect participle” which is used to form (a) passives and (b) perfect tenses. He has justified the positing of the Morphomic “N-pattern” ([1SG. PRES. + 2SG. PRES. + 3SG. PRES. + 3PL. PRES.] vs. the rest of the paradigm) in a series of studies (Maiden 1992, 2004, 2005), and I do not question the utility of that notion in the examples for which it has been argued there.

In Surmiran, though, the choice of a stem is clearly correlated with a phonological factor (location of main stress), entirely transparently in most cases and easily recoverable in the small set of cyclically derived non-verbs derived from other verbs illustrated in (12).
A morphomic analysis, in contrast, needs to invoke a set of categories (present indicative singular and 3rd plural except for verbs that take -esch, singular imperatives, third conjugation infinitives, and a heterogeneous collection of non-verbal categories) as the environment for ‘Stem 1’ or its equally complex complement as the environment for ‘Stem 2’. The analysis as “phonologically conditioned allomorphy” (Carstairs 1987, 1988) seems clearly indicated here.

2 Some Other Swiss Rumantsch Languages

The analysis of stem alternations presented in section 1 is based entirely on the facts of Surmiran as spoken in Savognin and the surrounding area, and it is this language that I have explored in some detail. From a consideration of the available descriptive literature on other Rumantsch languages of Switzerland, however, it appears that parallel accounts may well be more broadly applicable.

2.1 Surselvan

Spescha (1989: 473–478) lists some 28 patterns of alternation in Surselvan verbs, making it clear that (as in Surmiran) it is not possible to predict either alternant from the other. Some of these are illustrated in (15).

(15) Infinitive 3SG

<table>
<thead>
<tr>
<th>clamar</th>
<th>cloma</th>
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<tbody>
<tr>
<td>tschintschar</td>
<td>tschontscha</td>
</tr>
<tr>
<td>purtar</td>
<td>porta</td>
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<tr>
<td>alzar</td>
<td>aulza</td>
</tr>
<tr>
<td>filtschar</td>
<td>faultscha</td>
</tr>
<tr>
<td>ludar</td>
<td>lauda</td>
</tr>
</tbody>
</table>
As in Surmiran, the stem variants are distributed such that a stem shape whose last vowel is suitable to bear stress appears in rhizotonic forms, while forms with desinential stress have a final vowel limited to unstressed variants of [a, i, u, e, o]. The ‘stressed’ stem appears in the singular and the third plural of the Present (indicative and subjunctive), in the singular imperative, and in the infinitive of class 3 verbs; the ‘unstressed’ stem appears elsewhere. The only difference between this system and that of Surmiran is that the first and second person plural present subjunctive forms in Surselvan have desinential stress (and thus require the ‘unstressed’ stem). The two stems can be lexically differentiated by the quality of the final vowel, and stem choice can be accomplished by regularities of the phonology comparable to those presented in (2) above for Surmiran. The augment –esch appears with the only stem shape in otherwise-rhizotonic forms of some verbs.

Again as in Surmiran, forms derived from alternating stems generally show the stem alternant appropriate to the position of stress in the derived form. Among these are derived factive verbs such as buentar ‘cause to drink’ from beiber ‘drink’ (2pl buein) and stuncsentar ‘make tired’ from staunchel ‘tired’, and deverbal nouns such as la lavur ‘the work’ from luvar ‘to work’ (3sg lavura), la dumonda ‘the question’ from dumandar ‘to ask’ (3sg dumonda), etc.

Notice that if we thought of stem alternation as conditioned by purely morphological categories, we might expect some verbs like buentar to show it: that is, to have 3sgPres. forms like *beibenta, etc. This never occurs, however: the presence of the causative formative –ent will always prevent stress from falling on the preceding stem, so there is never any way to get the ‘stressed’ stem in the “N-pattern” forms. Stem choice in Surselvan thus appears to be phonologically conditioned allomorphy, as in Surmiran.

2.2 Engadine Languages

The two closely related languages spoken in the Engadine display similar systems. Both of these languages have somewhat different vowel systems from that of Surmiran, including
front rounded vowels. The relations between the vowel systems of stressed and unstressed syllables are otherwise similar to what we find in Surmiran, and alternations along the same lines as what we find in that language are characteristic. To some extent (especially in Puter) these alternations are being leveled in contemporary speech, and it is probably the case that two-stem (alternating) verbs are increasingly a minority in the lexicon. This implies that the class of verbs taking the augment –esch (also –isch in Vallader) cannot be identified as simply as in Surmiran, as verbs with a single stem inappropriate for taking stress. Nonetheless, within the remaining (and still substantial) class of items showing stem alternations, the distinction between one stem and the other tracks the distribution of rhizotonic vs. non-rhizotonic forms rather than an otherwise arbitrary collection of morphological categories. In addition, within this class the phonological correspondences between stressed and unstressed stems are still idiosyncratic enough to support an analysis of the sort proposed above.

2.2.1 Puter

This form of Rumantsch, spoken in the upper Engadine (cf. Ganzoni 1977, Scheitlin 1962, Urech-Clavuot 2009), displays at least 18 distinct patterns of stem alternation involving a single vowel in the stem, and others that are more complex.

Some unusual alternation patterns in Puter do not have direct parallels in Surmiran or Surselvan. One of these is a group of verbs including couscher ‘cook’, 1SG cousch, 1PL cuschains; volver ‘turn’, 1SG volv, 1PL vulvains; vainscher ‘defeat’, 1SG vindsch, 1PL vandschains among others, displaying a third stem variant in the past participle: cot(ta), vout(a), vint(a). In some cases, these verbs have both the unusual participle and the expected form: thus, Urech-Clavuot (2009) gives both vint(a) and the expected vandschieu/vandschida as past participle forms for vainscher. In some cases these three-stem forms have been regularized: Ganzoni (1977) gives the forms above for couscher ‘cook’, but Urech-Clavuot (2009) gives the 1PL form as coschains, perhaps regularized on the model of the participle.
Ganzoni 1977: 132f. [my translation] notes that “a good portion of the irregular verbs earlier
had two past participles, an irregular and a regular: _tais, tendieu_ [‘tightened’]; _promoss, pro-
movieu_ [‘promoted’]. Many of these irregular past participles are still used today only
as adjectives: _commoss_ ‘moved, touched, deeply affected’; _stret_ ‘tight’.” This development
would appear to be a straightforward instance of Kuryłowicz’s (1949) “fourth law of analogy.”

Another interesting development in Puter is an alternation pattern involving verbs
whose ‘unstressed’ stem has no vowel corresponding to the final vowel of the ‘stressed’
stem: _mner_ ‘lead’, 1SG _main_; _tmair_ ‘fear’, 1SG _tem_; _trer_ ‘pull’, 1SG, _tir_; _cusgl_ ‘advise’,
1SG _cussagl_, _artschaiver_ ‘receive’, 1PL _arvschins_. Although the stressed vowel corresponding
to such a ∅ is not predictable, the two stems can still be distinguished by the quality (or
absence) of the final vowel, as in other dialects. In the case of verbs whose unstressed stem
contains no vowel at all (e.g. /mn-/ ‘lead’, /tm-/ ‘fear’, /tr-/ ‘pull’) while the stressed
stem contains a final vowel that can bear stress (/main-/, /tem-/, /tir-/), the choice between
stems can be made straightforwardly by the constraint system along the same lines as in
Surmiran, on the basis of stress. The same is true for stem pairs such as { /k˘ us˘aL-/ , /k˘ u-
saL- /} ‘cook’, { /ærv˘ aL-/ , /ɔrv˘ aﬁL-/ } ‘receive’, etc., on the assumption that vowel qualities associated
with unstressed syllables characterize the unstressed stems of such words.

Apart from such phenomena, the ‘stressed’ stem is used as in Surmiran in the singular
and third person plural of the present indicative, the singular imperative and the entire
paradigm of the present subjunctive (also used as a polite imperative). The ‘unstressed’
stem is used elsewhere; and again the difference corresponds directly to the difference between
forms with root _vs._ desinential stress. The augment –esch appears in otherwise-rhizotonic
(finite) forms of many verbs of the first and fourth conjugations.

 Derived forms display the stem appropriate to their surface stress, as in _stanglanter_
‘to tire’, from _staungel_ ‘tired’. More research is necessary to establish the generality of
the phenomenon, but it appears that stress-conditioned stem choice is robustly attested
throughout the Puter lexicon, and not only in the verbal paradigm.
2.2.2 Vallader

The facts characterizing the language of the lower Engadin (cf. Ganzoni 1983, Tscharner 2003) differ from those in Puter primarily in that the augment has two forms: \(-esch\) for first conjugation verbs (e.g. *evitar* ‘avoid’, 1SG *evitesch*) but \(-isch\) for verbs of the fourth conjugation (e.g. *impedir* ‘hinder’, 1SG *impedisch*).

Here too we find when a verb has two stems, the stem that shows up in related derivational forms is generally predicted by the location of the stress. Some examples are given in (16).

(16) a. *mas’dar* ‘to mix’, 1SG *‘maisda*
   *‘maisda* ‘mixture, blend’; *mas’düra* ‘mixture’

b. *dur’mir* ‘to sleep’, 1SG *‘dorma*
   *dur’mind* ‘sleeping (adv.)’, *durmi‘gliunz* ‘sleepyhead’, *dur’mida* ‘long nap’; *‘dorma* ‘narcotic, soporific’

c. *ran’tar* ‘to tie up (esp. livestock)’, 1SG *‘raint*
   *ran’tam* ‘halter’

d. *recuur’rer* ‘to appeal, seek redress’, 1SG *re’cuor*, 1PL *recur’rin*
   *re’cuors* ‘recourse, redress’; *recur’rent* ‘complainant’

As in Surmiran, we find some examples in which the stressed stem appears ‘inappropriately’ when a derived form is built not on the alternating verbal base but on an existing word for which that stem is appropriate, as in the set of words in (17).

(17) *sco’lar* ‘to educate’, 1SG *‘scoula*
   *scola’ziun* ‘education’, *sco’lar* ‘scholar; *scoulas* ‘educational system’
   ‘*scoula* ‘school’, *scou’lina* ‘kindergarten’, *scou’letta* ‘crafts school’

While more restricted in its lexical extension than is the case in Surmiran, then, the stem alternation system in Puter and Vallader displays essentially the same character for
those lexemes to which it applies.

2.2.3 Val Müstair

The language of this side valley of the Engadine, as documented by Schorta (1938), differs in many details from other forms of Swiss Rumantsch. One of these is cited by Maiden (2011: 45) as presenting a difficulty for the present analysis, arguing that “Anderson’s analysis implies that if, in a verb taking –esch, stress underwent an obligatory shift from the ending onto the root, then that stress shift would duly be accompanied by –esch.”

In Val Müstair, stress in first conjugation (–ár) infinitives systematically shifts onto the root: láyd ‘to spread manure’ (Surm. ladár/léida); fíl ‘to spin’ (Surm. filár/féila). The stem alternant that appears is the one normally used for rhizotonic forms, as expected. Where the verb normally takes the augment (here –áj rather than –ésch), however, this element does not appear in the infinitive, and instead stress remains on the ending: batjár ‘to baptize’ (3sg batjája). In augmenting verbs, then, the shift of stress expected on the basis of verb class does not result in the introduction of the augment, but rather is blocked.

As Maiden notes, this is accommodated on the present analysis by saying that verbs taking the augment only have a single stem, which is not able to take stress, while other verbs have two stems. The expected ‘stressed’ stem occurs when stress falls on the root of the infinitive, as in the third conjugation. The fact that the augment does not appear under these circumstances falls out from the fact that the rule introducing it (the local analog of rule (5) above) is limited to finite inflection. In fact, the augment (Surm. –esch, Val Müstair –aj) never appears except in tensed forms: never in related non-verbal forms, never in participles or infinitives. Therefore this rule is not available to ‘save’ verb stems like Val Müstair bätj- in the infinitive from bearing stress, and the only alternative to impermissible stem stress appears to be to stress the infinitival ending instead.

These facts are thus entirely consistent with (the extension to Val Müstair of) the present analysis. They do show that there are morphological conditions on the rule introducing
the augment, but they do not compromise the principle that like stem choice, the appearance of this element *where possible on morphological grounds* is governed by the location of stress.

## 2.3 Other Languages of Surmeir

Although the speech of the Julia valley around Savognin has served as the basis of the ‘standard’ form of Surmiran as taught in schools, printed in the local newspaper *La Pagina da Surmeir*, etc., the region of Surmeir is home to a number of other, rather different forms of Rumantsch. One of these presents another instance in which stress normally found on a desinence is shifted onto the stem: in particular, the replacement of 1pl Present Indicative ending –áñ/ájn by –än in some areas. This is mentioned by (Haiman & Benincà 1992: 95):

The only Rhaeto-Romance dialect [in which stress in the 1st plural present indicative is rhizotonic] seems to be that dialect of Surmeiran [sic] which is spoken in Bravuogn/Bergün. […] The most plausible development, given other developments in both the 2nd singular and the 1st plural is the following. First, the 1st plural was expressed by HOMO/UNUS + 3sg. (compare, on the one hand, the use of on in colloquial French and other impersonal forms with 1st plural meaning in Tuscan and Friulian; on the other, the use of we as the unspecified agent in English). Second, this PRO form appeared post-verbally in inverted word order as a clitic. Finally, -VN was reinterpreted as a bound suffix on the verb stem, obligatory in both direct and inverted word order.

While the fact of the replacement of the 1pl ending is clear enough, Haiman & Beninca’s explanation for it is problematic. For one thing, the reflex of impersonal unus in Surmiran is in(s), not àn (Grisch 1939). The innovated unstressed form of the 1pl ending would thus not appear to continue this element. Furthermore, the form that does, Surmiran ins, does not invert with the verb even under conditions where Verb-second would be expected (Anderson 2006). In terms both of its shape and of its syntactic positioning, then, the reflex of earlier unus is not likely as the source of the 1pl ending –än.
There is, however, another possible source for the observed change in this ending, which lies in the fact that in all tenses other than the Present Indicative, $1_{PL}=3_{PL}=-(\ddot{a})n$. The replacement of $-\acute{a}n/\acute{a}jn$ by $-\ddot{a}n$ might simply be the generalization of this regularity (and thus, the ending $-\ddot{a}n$) to the Present Indicative.

In Bravuogn/Bergün, verbs that take $-esch$ in the rhizotonic forms of their paradigm extend this to the $1_{PL}$ of the present indicative (Kamprath 1987: 182): pateir ‘to suffer’, $1_{SG}$ [pateš], $1_{PL}$ [pateśan], $2_{PL}$ [patēks], $3_{PL}$ [pateśan]. So the prediction Maiden derives from the present analysis is in fact confirmed for this language, unlike the situation in Val Müstair where other factors intervene to prevent the expected extension of the augment to newly rhizotonic forms.

This does not, of course, exclude the ‘morphomic’ account: one could simply claim that the morpheme including the singular and $3_{PL}$ of the present indicative is extended here to include the $1_{PL}$ as well, and continues to condition both the occurrence of one stem rather than the other and also the presence of the augment in verbs that take this. This analysis continues to disregard the obvious generalization that exactly the categories that behave in this way are those where (predictable) stress would fall on the stem (as opposed to those where it would fall on the ending), but in that respect it is no different from the morphomic account of ‘standard’ Surmiran.

Contrary to Haiman & Benincà’s (1992) description, however, Bravuogn/Bergün is not the only area in which these newly rhizotonic forms of the $1_{PL}$ Present Indicative are found. The Rumantsch of Vaz (Obervaz, Lenzerheide, Valbella; cf. Ebneter 1981) also displays the replacement of $1_{PL}$ Present Indicative $-\acute{a}n/\acute{a}jn$ by $-\ddot{a}n$. Here, however, there is an additional complication. For many verbs, the $1_{PL}$ ending can be either $-\acute{a}n$ or $-\ddot{a}n$. Ebneter’s dictionary indicates for roughly 1/3 of verbs the $1_{PL}$ form in $-\acute{a}n$, perhaps intending that this form is preferred for these verbs but $-\ddot{a}n$ for others. Regardless, both here and in Ebneter 1994 he indicates that both forms of the $1_{PL}$ are possible and to some extent in variation with one another.
When the normal stressed form is specified, this is associated with the stem normally used with stressed endings: amblidar ‘forget’, 1SG ambloid, 1PL amblidain. This is also true of forms that take –esch: adorar ‘adore’, 1SG adoresch, 1PL adorain; sa vastgir ‘get dressed’, 1SG sa vastgesch, 1PL sa vastgain.

When the unstressed, innovative 1PL ending is used, the stem that appears with it is that associated with rhizotonic forms:

<table>
<thead>
<tr>
<th>Infinitive</th>
<th>1SG</th>
<th>1PL</th>
<th>gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>amprastar</td>
<td>amprest</td>
<td>amprestan</td>
<td>lend, loan</td>
</tr>
<tr>
<td>amvarnar</td>
<td>amvearn</td>
<td>amvearnan</td>
<td>overwinter livestock</td>
</tr>
<tr>
<td>numnar</td>
<td>nomn</td>
<td>nomnan</td>
<td>call, name s.t.</td>
</tr>
<tr>
<td>s-chéuder</td>
<td>s-cheud</td>
<td>s-cheudan</td>
<td>scudáiz (2PL) thresh</td>
</tr>
</tbody>
</table>

Importantly, this also extends to verbs taking –esch:

<table>
<thead>
<tr>
<th>Infinitive</th>
<th>1SG</th>
<th>1PL</th>
<th>gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>habitar</td>
<td>habitesch</td>
<td>habiteschan</td>
<td>live somewhere</td>
</tr>
<tr>
<td>s’anclinar</td>
<td>s’anclinesch</td>
<td>s’anclineschan</td>
<td>kneel, genuflect</td>
</tr>
</tbody>
</table>

In all cases, the location of stress correctly predicts both the stem used and also the presence of –esch.

Finally, when both endings are possible, each is associated with the stress-appropriate stem; the two forms are in variation, but no forms appear with the ‘wrong’ stem.

<table>
<thead>
<tr>
<th>Infinitive</th>
<th>1SG</th>
<th>1PL</th>
<th>gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>ampruar</td>
<td>amprov</td>
<td>ampruvain/amprovan</td>
<td>try</td>
</tr>
<tr>
<td>gudair</td>
<td>giod</td>
<td>giodan/gudain</td>
<td>enjoy</td>
</tr>
<tr>
<td>scaldar</td>
<td>stgoald</td>
<td>scaldain/stgoaldan</td>
<td>heat, warm</td>
</tr>
<tr>
<td>baiver</td>
<td>baiv</td>
<td>bavain/baivan</td>
<td>bavaiz (2PL) drink</td>
</tr>
</tbody>
</table>
While these data cannot of course be claimed to render the morphemic account of stem alternation impossible, they do pose a problem for that analysis: it is fairly clear that stem alternation and the appearance of \(-esch\) (in finite verbal forms) are tied directly to the location of stress, even where this is potentially variable, and not to a fixed set of morphological categories.

3 Conclusion

I conclude, therefore, that stem shape (including the possible appearance of \(-esch\) in finite forms) in Rumantsch is, as previously claimed, a clear instance of phonologically conditioned allomorphy. In the case of Surmiran, the constraint system that governs the location of stress and the relations between vowel quality and stress suffices to describe the stem allomorphy, on the assumption that verbs generally have two stem shapes (and \(-esch\) verbs only one) differing in their ability to accommodate stress. In some other Swiss Rumantsch systems, the alternation pattern is more restricted, and a diacritic of some sort may be necessary to distinguish the behavior of verbs that take an augment such as \(-esch\); but given this, the variation remains phonologically conditioned. This is not to deny that morphological categories play a role (e.g., in constraining the appearance of \(-esch\) to tensed forms of first and fourth conjugation verbs), but there is no warrant for invoking the further step of complete and arbitrary morphological categorization that would be implied by associating the variation with a morphome.
References


Maiden, Martin. 2005. Morphological autonomy and diachrony. *Yearbook of Morphology*


Footnotes

1This work was supported in part by NSF awards #BCS-0418410 and #BCS 98–76456 to Yale University, and by awards from the Social Sciences Research Fund at Yale. Discussion with Martin Maiden (and others at the OxMorph meetings) has been extremely important in the development of the analyses presented here, as will be evident, even if I find myself in the end unable to agree with him on some important points.

2Verbs of the class that take the -esch augment where the stressed stem is called for have only a single stem shape, as discussed above in section 1.2.

3See Kamprath 1987 for discussion of motivations for cyclic interaction in a closely related form of Rumantsch.