The morphophonology of the French prefix {RE}

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In generative analyses of French, the iterative prefix {RE} is usually assumed to have two surface phonetic manifestations: one exclusively consisting of the consonant [r], and one where this [r] is followed by a schwa (see for instance Dell 1985:227, 234 for an SPE-like analysis, and Rialland 1986 for a non-linear account).[1] With respect to the distribution of these two forms, before vowel-initial stems [r] is assumed to be obligatory (see examples under 1a). Before consonant-initial stems, [r] can be followed by schwa (see 1b):

(1)	a	ramener	[ramne]	'to bring back'
		récrire	[rekrir]	'to write again'
		rapporter	[rapOrte]	'to bring back'
		rallumer	[ralyme]	'to relight'
		rajuster	[ražyste]	'to readjust'
		rouvrir	[ruvrir]	'to open again'
	b	refaire	[rœfɛr]	'to do again'
		repartir	[rœpartir]	'to start off again'
		redonner	[rœdOne]	'to give again'
		recasser	[rœkase]	'to break again'

In all generative analyses of this alternation -- be they SPE-like or non-linear -- a purely phonological, automatic explanation is given. In these analyses, the phonological behaviour of {RE} is explained in terms of a more general phonological process, traditionally referred to as *Elision*. Elision implies that a schwa is never maintained before a following vowel. In this respect, the behaviour of {RE} is seen as identical to that of the proclitics *je, me, te, se, le, ce, de, ne* and *que* (see 2):

(2)	né écris pas	'do not write'
	Jacques ne vient pas	'Jacques will not come'
	Marie n(e) vient pas	'Marie will not come'
	n(e) viens pas	'do not come'

Contrary to what is usually assumed, we will argue in section 1 that [r] is not the regular prevocalic form of the prefix {RE}. This form is used in a limited number of verbs only, which the speaker has to learn on a one by one basis. As a consequence, an analysis in terms of a fully automatic elision-process is problematic, to say the least.

There are two other surface manifestations of the prefix {RE} in prevocalic position which up until now have never received a serious generative analysis. In the first place, the regular prevocalic form of this prefix is not [r], but [re]. The meaning of the following verbs is roughly identical to the meaning of the corresponding examples of (1a):

(3)   réamener, réécrire, réapporter, réallumer, réajuster, réouvrir

In the second place, one also finds some striking cases where the apparent schwa of the prefix is not deleted in prevocalic position (Léger 1956: 287-8):

(4)   re-embêter   [rœãbɛte][2]   'to annoy again'
          re-arrêter   [rœarɛte]   'to stop again'
          re-écrire   [rœekrir]   'to write again'
          re-embarquer   [rœãbarke]   'to embark again'
          re-élancer   [rœelãse]   'to launch again'

Note, finally, that the phonetic realization of the preconsonantal form of the prefix {RE} is subject to the following alternation. If the preceding word is consonant-final, schwa is obligatorily pronounced (see 5a); if the preceding word is vowel-final (see 5b), or if there is no preceding word (see 5c), schwa is optionally pronounced.

(5)   a   Jacques secoue le pommier   'Jacques shakes the apple tree'
       b   Marie s(e)coue le pommier   'Marie shakes the apple tree'
       c   S(e)coue le pommier   'Shake the apple tree'

In this paper we will analyse the morphological aspects of the various surface manifestations of the prefix {RE} (section 1) and its phonological aspects (section 2).

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[2] The pronunciation of schwa is transcribed as [œ] in all examples. This means that we assume that in standard French the pronunciation of the schwa and of the full vowel [œ] are identical. See for instance Dell (1985).

1. *Morphological aspects of {RE}.*

In this section we examine the three manifestations of the prefix {RE} in prevocalic position: [r], [re] and [rœ]. The preconsonantal form will be subject to some discussion in the next section.

1.1. *Prevocalic [r].* In standard French, the productive prevocalic form of {RE} is not [r], but rather [re]. According to Mok (1964), [r] only shows up before a limited number of vowel-initial verb stems, but not before others. Thus, it can be used without problem in for instance *récrire* 'to write again', *ravoir* 'to have again' or *rattacher* 'to attach again', but not in *?*rédifier* 'to edify again', *?*rarguer* 'to argue again', *?*reffarer* 'to square again', etc. Moreover, as far as for instance *ravoir* is concerned, /r/ can be used before certain forms (for instance *ravoir*), but not -- at least not in standard French -- before other forms (**reu*, **ra*, **ront*) (see Grevisse 1988: 247-51). Finally, it must be noted that [r] is especially used in front of frequent verbs. This contrasts with the regular use of {RE}, which generally is [re], and sometimes [rœ]. For instance, in front of infrequently used verbs like *auréoler* or *ausculter*, speakers generally use [re] instead of [r], when forced to produce a form with {RE}.

This means, in our opinion, that speakers of standard French must *learn* before which specific word forms to use [r]. If they have not learned such a form, they will always produce a derived form with [re] (see also Mok 1964: 102). That is, the forms with [r] are lexicalized. It seems likely that speakers of standard French have a form like *récrire* [rekrir] stored as such in their lexicon with possibly a morphological redundancy rule *à la* Jackendoff (1975) allowing them to relate the morpheme /r/ to the lexical entry of the prefix {RE}.

If forms with initial [r] are stored in independent lexical entries, whereas the forms with [re] are productively derived, we would expect the lexically stored forms with [r] to develop a meaning different from the meaning of the productive [re] (cp. Aronoff 1976). This is indeed exactly what happens in French. For instance, Mok (1964) lists a number of doublets with [re] and [r] for the same verb stem. In all cases, the form with [re] is semantically entirely transparent, whereas this is not always so for the forms beginning with [r]. Some examples are given under (6).

(6)   rétablir 'to recover'   /   réétablir   'to re-establish'
         rassurer 'to reassure' /   réassurer   'to reinsure'
         rappeler 'to remind'   /   réappeler   'to call again'

Because it is so highly lexically specific, we conclude that prevocalic [r] is not phonologically related to the preconsonantal form by means of some elision process (see section 2 for further discussion).

1.2. *Prevocalic [re]*. Now, how about the form [re]? A first possibility is that it is phonologically derived from the preconsonantal form. However, there is no indication in the synchronic phonology of French that schwa alternates with [e] in prevocalic position. For instance, the in many respects similarly behaving monosyllabic proclitics mentioned above never surface prevocalically with an [e] vowel.

Interestingly, there also is some diachronic evidence in support of this analysis. As Bourciez (1958: 93-4) observes, schwa in the initial syllable of certain lexical items has changed to [e] under normative influence (see 7a), whereas in other lexical items it has been maintained as such (see 7b):

(7)   a   désir 'desire', périr 'to perish', férir 'to strike', réformer 'to reform', réclamer 'to complain', réduire 'to reduce'
        b   fenêtre 'window', venir 'to come', lever 'to raise', remettre 'to put back (again)', repousser 'to push back', devoir 'to have to'

This shows that the historical relation between schwa and [e] is a phonologically arbitrary development. Historically, the transition of schwa to [e] seems to have proceeded on a word by word basis, i.e. has been subject to lexical diffusion.[3] Thus, we see that neither the synchronic relation between schwa and [e] in {RE}, nor the diachronic relation between schwa and [e] in word-initial syllables is phonologically motivated.

To summarize our discussion thus far, the prevocalic form [re] is not phonologically derived from the preconsonantal form either, but rather is a suppletive allomorph of the prefix {RE}.

1.3. *Prevocalic [rœ]*. As Léger (1956: 287-8) and Mok (1964: 104-5) observe, in some cases the form with a schwa shows up not only before vowel-initial verbs as we have seen in (4), here repeated as (8a), but also before vowel-initial words belonging to non-verbal syntactic categories (8b):

(8)   a   re-embêter, re-arrêter, re-écrire, re-mourir, re-embarquer, re-élancer
        b   re-enfant 'another child', re-espoir 'another hope', re-ici 'here again', re-oh 'another oh'

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[3] As observed by the anonymous reviewer of this paper, this process may still be continuing, as exemplified by the pronounciation of the name *Mitterrand* as [miterã], instead of [mitœrã] or even [mitrã].

We ourselves have observed and checked with other native speakers the following example where in the inflected form of the verb **ravoir** 'to have again' the form with a schwa shows up:

(9)   J'ai re-eu un coup   'I have had another blow'

We entirely agree with Mok (1964) that this particular use of {RE} must be given a separate status. We do not agree, however, with Mok's (1964: 100) following observation that the use of [rœ] is entirely void of interest for linguistic analysis:

(10)   'These are strictly individual creations, intentional deviations from the principles which the members of the linguistic community observe when they derive words by means of the prefix RE-' (translation ours)

This observation is questionable, because this type of use of {RE} is certainly not a purely individual fantasy creation limited to some individuals consciously breaking the linguistic norm. In fact, we think this use of {RE} is phonologically perfectly wellformed, albeit marginally used: its marginality probably stems from the fact that its use is conditioned by some very specific pragmatic factors (see also Léger 1956: 287 and Nyrop 1908: 234-5). Whatever these factors may be, we have regularly observed -- and continue to observe -- forms with this type of {RE}. Apparently, the phonological and the morphological grammar of speakers of French allows to produce such forms, and -- equally important -- to interpret such forms without any problem. More in particular, when speakers create their own words (in, for instance, secret languages), they usually respect the phonology of the language. We are therefore forced to conclude that the phonology of French structurally allows for a phoneme /œ/ in prevocalic position.

   One could certainly object that the phonology of French does not permit schwa-vowel sequences morpheme-internally. We think that this means that the vocalic sequences of the examples of (8) are not schwa-vowel sequences, but rather sequences of two full vowels and thus that in this case we have another suppletive allomorph of the prefix {RE}, namely /rœ/, where [œ] represents a full vowel. Note that one of the characteristic properties of schwa is the fact that it alternates with zero. Compare, for instance, *geler* [žœle] 'to freeze' and *gueuler* [gœle] 'to shout'. In the first example the [œ] can be dropped and thus is to be analyzed as a schwa. However, in the second example the [œ] cannot be dropped, so this is not the manifestation of a schwa, but of the full vowel [œ]. The alternation with zero is what schwa in French distinguishes from the full front rounded vowel [œ], which never alternates with zero. So the vowel in prevocalic [rœ] is not a schwa, but rather a full vowel [œ]. Moreover, whereas the distribution of /re/ is limited to verbs, /rœ/ has a much larger distribution. In the follow-

ing examples /rœ/ is combined with all kinds of syntactic categories, be they vowel-initial or consonant-initial:[4]

(11)   a   <u>/rœ/ + noun</u> (examples from Flaubert):[5]

le père d'un re-enfant	'the father of another child'
voici une re-lettre	'here is another letter'
la nouvelle d'un re-espoir	'the news of another hope'
un accès de re-goutte	'an outburst of another gout'
Mme. Daudet est re-mère	'Miss Daudet is mother again'

       b   <u>/rœ/ + adjective</u> (example from Queneau):

            vivante, re-vivante   'alive, alive again'

       c   [rœ] + pronoun (example from Gyp):

            c'est remoi, tante Josette   'Here I am again, aunt Josette'

       d   <u>/rœ/ + numeral</u> (example from Dubut de Laforest)

            Du quatre. - Et du re-quatre   'four of them - and another four'

       e   <u>/rœ/ + adverb</u> (example from Céline):

            re-ici!   'here again'

       f   <u>/rœ/ + interjection</u> (examples from Gyp):

            rezut   'damm it again'

            reoh   'oh again'

       g   <u>/rœ/ + verb</u> (see examples under 3)

The very same allomorph also shows up as an independent form in an example from the *Trésor de la langue française*:

(12)   Bouboule (...) la paluche tendue par-dessus le zinc, lance simplement: "Re...!" 'Bouloule stretches his hand over the bar and simply says: 'Another ...!''

The conclusion of this section is still another allomorph of the prefix {RE}, which thus has no less than three different suppletive allomorphs. Their representation will be the subject of the next section.
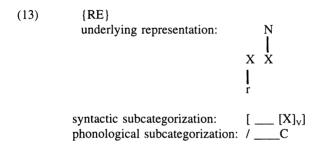
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[4] This large distribution could perhaps also be accounted for by means of a syntactic mouvement rule which moves /rœ/ from the preverbal position to some other position in the sentence. Note that this was regularly possible in medieval French (see McMillan 1970). This could mean that an example like 'J'ai eu une re-lettre' is derived by means of syntactic movement from 'J'ai re-eu une lettre'. Further research is mandatory.

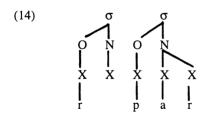[5] Examples cited from Mok (1964) and Léger (1956).

2. *Phonological aspects of the allomorphs of {RE}.*

In this section we will account for the phonological aspects of words formed with the three suppletive allomorphs discussed thus far: the preconsonantal form with a schwa (see 2.1), the prevocalic form [re] (see 2.2) and the prevocalic form [rœ].

2.1. *Representational aspects of preconsonantal {RE}.* The preconsonantal suppletive allomorph consists of an [r] followed by a schwa. In most non-linear analyses, this schwa is represented as an empty nucleus or as an empty vowel (cp. Anderson 1982, Rialland 1986, Encrevé 1988, Charette 1991, De Jong 1993a, Noske 1993, Montreuil 1993).[6] Because the occurrence of the schwa in {RE}, in proclitics and in morpheme-initial syllables is often unpredictable from the phonological context, the position in which a schwa can occur must be specified in the underlying representation. Preconsonantal {RE} can be represented as under (13):
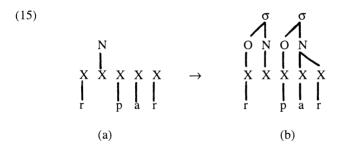
(13)   {RE}
          underlying representation: N
                                            |
                                      X X
                                      |
                                      r

          syntactic subcategorization: [___ [X]$_V$]
          phonological subcategorization: / ___C

A fully syllabified representation form for the form *repars* 'to leave again' is given under (14) (see for instance De Jong 1993):

(14)   σ   σ
             /\   /\
            O   N   O   N
            | | | /\
            X   X   X X   X
            | | | |
            r   p a   r

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[6] See however Tranel (1987), who considers schwa as a floating vowel. For arguments against this analysis see Noske (1993) and De Jong (1993a).
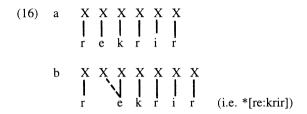
With respect to a case like (14), where the empty nucleus occurs before a consonant-initial stem, there are two possibilities: either the empty nucleus is by default filled in with the features for the front vowel [œ] yielding [rœpar], or -- as is documented in Rialland (1986) --, the features of the /r/ spread to the empty position, yielding a long, syllabic [r:] ([r:par]). The former possibility is obligatory after consonant-final words (like in *Jacques repars*), and optional in all other positions (like in *Marie repart* [marirœpar] / [marir:par] 'Mary leaves again' or *repars!* [rœpar] / [r:par] 'leave again'). It must be noted that in this model the schwa is not represented as an empty nucleus, but rather as an empty vowel. This is possible, because use is made of a CV-tier. In X-tier based models, the schwa should rather be represented as an empty X-slot. However, representation by means of an empty X-slot is as such not sufficient to represent schwa, because in that case the syllabification mechanism cannot determine whether the empty X-slot is consonantal or vocalic. There are, then, two possibilities: either the X-slot is underlyingly marked as [+vocalic] on the melody tier, or the empty X-slot is underlying associated to a Nucleus node. We think the latter alternative is preferable to the former. This essentially follows from the data discussed by Rialland (1986). These data show that in preconsonantal position one of the neighbouring consonants (i.e. the more sonorous one) spreads optionally to the empty position (cp. the discussion above). This yields the following representation for *repars*:

(15)

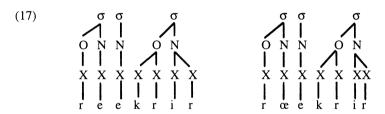

        (a)   (b)

If, however, we would underlyingly associate the empty X-slot to a feature [+Vocalic], spreading can no longer take place (unless we formulate a completely arbitrary rule of [+Vocalic] feature deletion). This means that the empty nucleus representation is essentially the correct one. It yields an adequate account of {RE} in preconsonantal position.

2.2. *Representational aspects of prevocalic {RE}.* With respect to the first case, we have argued in section 1.1 that forms with [r] are not derived, but are lexically stored as such, even if they are possibly still recognized as morphologically complex words. So we do not postulate an empty nucleus for prevocalic /r/. The
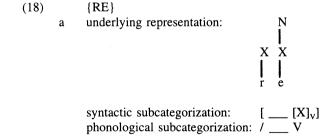
discussion in section 2.1 shows that in this we are on the right track, because the initial vowel, being more sonorous than the r-consonant, would spread to this empty nucleus position. On the basis of Rialland (1986) we would predict a lengthening of the initial vowel, which does not occur, however. This means that for instance a verb like *récrire* has the underlying representation (16a) instead of (16b):

(16) a   X X X X X X
          | | | | | |
          r e k r i r

      b   X X X X X X X
          | \| | | | |
          r   e k r i r   (i.e. *[re:krir])

In prevocalic position, {RE} surfaces in three different forms: lexicalized [r] (see section 1.1), [re] (section 1.2) and [rœ] (section 1.3). The phonological representation of the last two forms is rather trivial, as can be seen in the following two representations of **réécrire** and **re-écrire**

(17)   σ σ   σ   σ σ   σ
             /| | /| /| | /|
             O N N   O N   O N N   O N
             | | | /| \ | | | /| \
             X X X   X X X X   X X X   X X X XX
             | | | | | | | | | | | | | ||
             r e e   k r i r   r œ e   k r i r

The distinction between the two prevocalic allomorphs could be accounted for as follows (the preconsonantal allomorph is accounted for in 13):

(18)   {RE}
       a   underlying representation: N
                                                |
                                              X X
                                              | |
                                              r e

            syntactic subcategorization: [___ [X]ᵥ]
            phonological subcategorization: / ___ V

b   underlying representation:

$$
\begin{array}{c}
N \\
\wedge \\
X \quad X \\
| \quad | \\
r \quad œ
\end{array}
$$

syntactic subcategorization: none (see note 4)
phonological subcategorization: none

It is important to note that the structural description of (18a) is more specific than the structural description of (18b), and that the structural description of (18a) is included in that of (18b). This leads us to suspect that (18a) and (18b) are subject to the Elsewhere Condition. If that were so, the more specific form (18a) would always be selected, and would always block the selection of (18b). This is obviously wrong, because next to /re/, /rœ/ also occurs before vowel-initial verbs. It must be noted, however, that though the Elsewhere Condition is a general tendency, it does have exceptions, especially as far as derivational morphology is concerned. Kiparsky (1982: 134), for instance, observes the following doublets in English:

(19)   kneeled   /   knelt
          dreamed   /   dreamt
          crocuses /   croci
          indexes   /   indices

If the Elsewhere Condition were an absolute constraint, the existence of the more specific forms (the rightmost examples in 19) would always block the occurrence of the more general forms (the leftmost examples in 19). It seems to us that the choice between /re/ and /rœ/ before vowel-initial verbs is very similar to the examples under (19): the choice is not governed by the Elsewhere Condition, but rather by stylistic and pragmatic factors.

It is important to stress that the allomorph (18b) is not only an alternative form of the prefix with preconsonantal verbs, but it also shows up in cases like **rebonjour** 'Hello again', **renoces** 'another wedding', that is, in cases where the prefix {RE} combines with other syntactic categories than verbs. This means that same choice holds true for the variants used before consonant-initial verbs, that is the general form (18b) is only selected under certain stylistic and pragmatic conditions, whereas the more restricted form (13) will generally be the first choice. Speakers who choose (18b) will always realize the underlying /œ/, whereas those speakers who choose (13) will not always pronounce the schwa (see examples 5).

3. *Conclusion.*

In this paper we have argued that the realization of the prefix {RE} by means of a [r] in prevocalic position can not be derived by means of elision from the same underlying representation as the preconsonantal form, as least in standard French. It could be the case that things are different in colloquial French, but that is certainly beyond the scope of this paper. We have proposed that vowel-initial verbs prefixed with [r] are lexically stored as such. Further we have proposed to distinguish three suppletive allomorphs of the prefix {RE}: when {RE} is productively derived before vowel-initial verbal stems, it shows usually up as [re], but can eventually also surface as [rœ]. This /rœ/ has a much larger distribution than /re/, and can even be used as an independent lexical item. In a separate contribution we will give a more thorough analysis of the linguistic status of the allomorph /rœ/ in colloquial French and the possible relation between its eventual realization in prevocalic position and the use of the the proclitics *je, me, te, se, le, ce, de, ne* and *que* in this very same phonological context, in which they are sometimes also realized with a schwa-like vowel.

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