An Exquisite Portrait of Isabelle

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March 31, 2010

1 Introduction

This paper will examine a peculiar phenomenon in French: so-called "split base" versions of adjectives, in which hiatus across word-boundaries in masculine adjectives is resolved by epenthesising a consonant that is faithful to the feminine adjective.

To examine this phenomenon more closely I consulted Isabelle Charnavel, a native speaker of European French, on her way of handling hiatus between adjectives and nouns. The first part of this paper will lay out and discuss the results of the consultation. The second will propose a version of Output-Output Correspondence that may be able to explain how such forms may have arisen.

Section 2 will outline the problem. Next I will give a brief overview of Steriade (1998)'s proposal of Lexical Conservatism to solve the problem. Section 4 will look at the results of the interview with Isabelle. In section 5 I will discuss some observations and claim that Isabelle shows no clear pattern that is likely to be the result of derivation of split-base forms; rather her dialect includes memorised liaison forms. Sections 6 and 7 will propose a way of accounting for the original creation of split base forms using OO-correspondence.

2 French Liaison

French has two genders: masculine and feminine. Adjectives must agree with the nouns they modify. Most adjectives are post-nominal, but a few are pre-nominal. French does not tend to tolerate vowels in hiatus even across word-boundaries in certain syntactic units. The parts of the DP that come before the noun – generally the article and any pre-nominal adjectives – is one such unit (Steriade, 1998).

Many masculine/feminine pairs of adjectives are such that the masculine ends in a vowel and the feminine in a consonant. There are certain such adjectives in which the masculine has two forms, one pre-consonantal/citation form and one pre-vocalic form. The pre-vocalic is pronounced like the feminine adjective. Certain of these have been in the language so long they have their own spelling.

(1) a. un beau garçon
a beautiful boy

b. une belle fille
   a beautiful girl
c. un bel homme
   a beautiful man

The feminine form of the adjective has a consonant to allow liaison between the adjective and the noun. The liaison form of the masculine has the same pronunciation.

There are also subtler such liaison forms that differ slightly in pronunciation from both the masculine and feminine forms. These Steriade calls "split base" forms because they seem to be derived simultaneously from two bases: the masculine and the feminine. For example, some speakers, including Isabelle, will pronounce the masculine adjective *prochain*, normally pronounced [proʃã], as [proʃãn] pre-vocalically. The [n] seems to come from the feminine *prochaine* pronounced [proʃɛn]. Note that the last vowel in [proʃãn], [ã], is faithful to the masculine citation form. It is these forms that Steriade proposes Lexical Conservatism to address.

3 Lexical Conservatism

Steriade's basic proposal is that the Lexicon is very rich. We memorise forms that we know, and only derive unfamiliar or new words. When deriving new words we strive to be faithful to the lexicon in general. Things that belong to the same paradigm – that have much in common morphosyntactically – strive to be similar. When a new form is derived, if it can't be faithful to what we would normally call the input due to markedness constraints, it is faithful to something else with which is shares morphosyntactic features.

For example, English has very productive derivational morphology. Sometimes unacceptable stress patterns arise from this morphology. If a word is newly created, Steriade claims that it can take its stress pattern from related words, if they are in the Lexicon. Take the English word *obfuscate*, pronounced [ɑ́b.fə.skejt]. Steriade discovered that if a speaker is asked to form the *-able* form of *obfuscate*, he will struggle, but will usually produce either [ɑ́b.fə.skej.tə.bəl] or [əb.fɑ́.skə.bəl]. The speaker's ability to produce [əb.fɑ́.skə.bəl] was correlated with his knowledge of the word *obfuscatory*, pronounced [əb.fɑ́.skə.to.ri].

Steriade proposes that there are constraints that require that surface forms be faithful to listed forms that are closely related. The constraints take the following form (Steriade, 2000?):

(2) Lex(P): Let T(μ) be the allomorph of μ appearing in a form under consideration. Let L(μ) be a listed allomorph of μ. Let P be a phonological property. Then T(μ) is characterised by P iff L(μ) is characterised by P.

That is, for some phonological property P, such as a feature, the candidate T(μ) must be faithful to a listed allomorph with respect to P.

The basic idea certainly has appeal, but the proposed Lex(P) constraints get so specific as to make one wonder if they aren't simply restating the observation. For example, the

French liaison case includes these Lex constraints (Steriade, 2000?):

(3) a. Lex C]: The final consonant C of T(μ) has a correspondent C' in *some* listed allomorph, and C is featurally identical to C'. (italics mine).
b. Lex V́, gender: A stressed vowel in T(μ) has an identical correspondent in a listed allomorph *of the same gender* (italics mine)

My concern is that the constraints must be very specific in targeting particular segments, and what exactly they must be faithful to. What is it about the stressed vowel that makes it so that it must be faithful to a gender-identical allomorph? What is it about the final consonant that makes it freer: it need only be faithful to *some* allomorph?

I will attempt to remedy this seeming arbitrariness with a tentative proposal in section 6.

4 Isabelle's portrait

4.1 Methodology

Using pedagogical sources, I compiled a list of potential split-base forms of pre-nominal adjectives. I created sentences and noun phrases with these forms, as well as some control sentences, with the adjectives in non-liaison contexts, or with the feminine form. For example,

(4) un haut désire (m), une haute chaise (f), un haut idéal (m), une haute idée (f)

I asked her to read them aloud, and then also asked her to rank on a seven-point scale her judgements of various pronunciations. The pronunciations were written out in IPA. For example:

(5) un haut idéal

_____ɔ.ti.de.al _____o.ti.de.al _____ɔ.i.de.al _____o.i.de.al

4.2 Data

See the appendix for full raw data. Occasionally in the interview Isabelle would say that she couldn't say the phrase at all in that order: the adjective had to be postnominal. She would then suggest another noun for which it would work prenominally, if she could think of one, and then she ranked the possible pronunciations for that noun instead.

4.2.1 Summary of data

Generally, Isabelle was moderately to completely comfortable with the split-base forms. In every case for which she produced the split base form, she also produced either the feminine

form or the masculine form (with hiatus), and for some she could use all three. For every split-base form but one there was a masculine or feminine form with which she was equally comfortable or more comfortable. The exception was *commun* for which she ranked the split base form a perfect 7, the hiatus form a 4, and the feminine a 1. There were no adjectives for which she was equally comfortable with all three forms, though there were some for which she ranked two forms at 7 and one at 5.

Isabelle followed the pattern Steriade noted: only {n,r,l,z,t} were possible in liaison, though I did not check enough other consonants to be completely sure of this. A follow-up survey will have to include more potential liaison consonants to double-check this claim. However, Isabelle did not produce any split base forms with [t] from the feminine, unlike Steriade's consultants.

Split-base forms were completely impossible for the following adjectives:

- haut – ?[o] (m) / *[ɔt] (f) / *[ot] (split)
- sot – ?[so] (m) / *[sɔt] (f) / *[sot] (split)
- divin idéal – ?[divã] (m) / ?[divin] (f) / *[divãn] (split)
- franc – [frã] (m) / *[frãʃ] (f) / *[frãʃ] (split – same as f) / *[frãk] (spelling)
- fin – ?[fã] (m) / ??[fin] (f) / *[fãn] (split)

Note: "?" = 5, "??" = 3. Anything marked "?" was made perfect only by moving the adjective to the post-nominal position.

There was also a set of data points with the adjective *long/longue* which I have excluded from the present study. My ear was inadequate to determine her pronunciation, so these need to be recorded and analysed on a computer.[1]

4.2.2 A closer look

The behaviour of the adjectives is very difficult to predict. There is a certain amount of regularity, but it is very fine-grained. It is not possible to predict the forms based on, say, the masculine vowel. Moreover, there are few enough forms that there is often only one word for a given pattern, making it not much of a pattern.

A fairly robust generalisation is that if the masculine ends in [ã] and the feminine in [ɛn] – making the split-base form [ãn] – , both the feminine and the split-base forms are good, but the masculine hiatus form is bad or at least worse.

The adjectives showing this pattern are: *soudain, certain, vilain, ancien.*

When [ã] alternates with [in] or [yn], however, things less clear. There are fewer data and they do not behave regularly. We have one form with [yn] in the feminine: *commune* (f). In this case feminine suppletion [ko.myn] is impossible, but the split form [ko.mãn] is perfect, and hiatus is tolerable (4) [ko.mã].

[1] When I learn Pratt!

This contrasts sharply with the non-rounded equivalent: [in]. The split form is tolerable (5) in the phrase *le divin enfant*, but impossible with the same word in a non-idiomatic context *un divin idéal*, and impossible for the adjective *fin*. In both these cases, feminine suppletion and hiatus are okay, though of all these the only perfect phrase is *le divin enfant* pronounced with feminine suppletion: [di.vin]. Isabelle immediately recognised the phrase as coming from a popular Christmas carol *Il est né, le divin enfant*, which, for whatever reason, is sung with the feminine form [di.vin].

The vowel alternation [o] ∼ [ɔ] has no regularity when the consonants differ. The alternation [õ] ∼ [ɔn] in *bon/bonne* allows feminine suppletion and split base forms:

(6) *un bon ami* [bõ.na.mi] (split) ∼ [bɔ.na.mi] (fem) 'a good friend'

The alternation [o] ∼ [ɔs] in *gros/grosse* allows masculine hiatus and split base forms, with the [s] surfacing as [z]:

(7) *un gros avantage* [gro.a.vã.taʒ] (masc) ∼ [gro.za.vã.taʒ] (split) 'a big advantage'

Finally, as noted above, the adjectives *sot/sotte* and *haut/haute* have no split base form in Isabelle's idiolect. They can only surface in the masculine hiatus form, or, better, as post-nominal adjectives.

The front unrounded equivalent alternation is that between [e] and [ɛ]. This is seen in *-ier/-ière* endings, such as *premier(e)* 'first'. These sounds require further research, again with a computer to analyse the allophones, because neither of us felt certain of the difference between [e] and [ɛ]. It seemed she was producing split base forms as well as feminine suppletion forms, but I cannot be sure until I record and analyse her utterances. In any case, the masculine hiatus form was ranked as 4 for *premier* and 1 for *dernier* 'last'. The split and feminine forms were preferred.

(8) *premier amour:* ?prə.mje.a.mur(m) ∼ prə.mje.ra.mur (split) ∼ prə.mjɛ.ra.mur(f)

The difference between [e] and [ɛ] was a bit clearer in the absence of [r], but it was still not entirely clear. The data were similar. Isabelle ranked the feminine suppletion version of *un mauvais enfant* 'a bad child' as a 7, and the split form as a 5. She could not allow the hiatus form.

The difference between the front and back pairs might be accounted for by the closer acoustic relationship between [e] and [ɛ] than between [o] and [ɔ]. It was quite easy to hear the difference between [o] and [ɔ], unlike [e] and [ɛ]. The close relationship between the masculine and feminine vowels might allow suppletion, and split base too, if that is the correct interpretation of the data.

The variation among the back vowel adjectives, on the other hand, is harder to account for. It may be that the [e]/[ɛ] alternation is productive for the reasons stated. A wug test might be able to shed light on it, though wug adjectives are unlikely to be permitted pre-nominally, so the test might be impossible. The greater acoustic difference between the back vowels might make the process unproductive, and therefore word-specific, perhaps memorised. We will consider this possibility further below.

5 Analysis

I have no thorough analysis that can account for these data. There is not enough of a pattern to extrapolate much. As such, I suggest that Isabelle does not create split base forms in her grammar. Rather, they are memorised, and she can optionally choose between the split base form and whichever other form is acceptable in the morphology. In the next section I will explore a version of Output-Output Correspondence that may be able to account for how these forms could have arisen in the languages in the first place. Here, I will simply make some observations, and explore some possibilities.

It seems to me that the crucial thing about these data is the sense of familiarity, or analogy. Steriade suggests that the limited set of liaison consonants is due to their appearing in very common liaisons: [n] in the split-base *un enfant* [ɛ̃.**n**ɑ̃.fɑ̃] 'a child', [l] in feminine suppletion *un bel enfant* [bɛ.**l**ɑ̃.fɑ̃] 'a beautiful child', [t] in set epenthetic forms like *a-t-il* [a.**t**il] 'has he', [z] in certain common plurals like *beaux amis* [bo.**z**a.mi] 'beautiful friends', and [r] in *premier homme* [prə.mje.**r**ɔm] 'first man'.

If this is the case, either the set of consonants is somehow grammaticalised – say as a list of consonants that can be epenthesised grammaticalised as a language-specific constraint – or there is some kind of faithfulness to these more common liaison forms. The common forms do not belong to the same paradigm as the adjectives we are looking at, so traditional output-output correspondence is not helpful, but it does seem to be something related. The masculine adjective adds a consonant that must have a correspondent in both the feminine form from the same paradigm, and in some common liaison form.

Steriade strengthens this claim by noting that some speakers allow *franc* (citation form [frɑ̃] to surface in liaison as [frɑ̃k]. She suggests that the [k] could be licensed by the liaison [k] in the phrase *sang impur* [sɑ̃.kɛ̃.pyr] in *La Marseillaise*. (In normal speech there would be no liaison [k] there). She also speculates that the [k] could come from the *C* in the spelling. In either case, the speaker is accessing something other than other listed forms or other output forms; she is choosing her liaison consonant on analogy with a phrase from an oft-heard song, or her knowledge of the spelling.

This is not to say that there is no way the grammar can produce such forms by itself. After all, the grammar comes from somewhere. Perhaps the speaker creates a constraint against liaison consonants that she does not hear frequently, since liaison is by no means universal across word-boundaries. Steriade suggests a constraint Liaison C:

(9) **Liaison C** Let T(μ) be the form under evaluation. Let C(μ) be a citation form with identical morphosyntactic features to T(μ). If S is a consonantal segment in T(μ) and S has no correspondent in C(μ) then S $\in \{l, n, r, z, t\}$

Certainly it is much easier to formalise a grammaticalised result of analogy or familiarity than it is to formalise the reference to familiarity itself. An appropriate research direction here is into exemplar theories which may be able to account for such things. Here, however, I will stick to OT.

Let us now turn to a possible way to account for the original formation of split base

forms.

6 O-O Correspondence: a new take

The relationship between the masculine and feminine forms can be characterised as a kind of output-output correspondence: the output of the masculine form in a prevocalic position is being compared to the outputs of both the masculine and feminine citation forms, which are also outputs. However, O-O correspondence usually depends on their being a subset relationship between the form under evaluation and the output to which it is being compared. Kager (1999) defines a variety of O-O correspondences, but all have an asymmetry between the two forms: base-reduplicant, base-truncated stem, and base-affixed stem. Here I will present a version of O-O correspondence that does not require the comparison form to be a base. Here is Kager's definition of *base*:

(10) a. A base is a free-standing output form – a word.
b. The base contains a *subset of the grammatical features* of the derived form.

This allows, for example, Canadian raising to be evaluated as an O-O phenomenon: the output of *writing* is compared to the output of *write* since the latter has a subset of the grammatical features of the latter.

There is no way in this O-O theory to compare, say, *writing* with *writer* since neither stands in the subset relation with the other. There is also the problem of transitivity of subset relation: *write* $\subset$ *writer* $\subset$ *writerly*. How do we know which word to compare *writerly* to? Both? Just the most basic (*write*)? Just the "immediate" subset (*writer*)?

My proposal is that two forms can be compared even if one is not a base of the other. As long as an order can be defined on the relationship between the compared forms, faithfulness constraint can make reference to the closest correspondent, or a correspondent in the closest form.

6.1 On order of the French forms

We can define an order on the relationship between the French adjectives using the same relationship as the base/affixed form relation: number of grammatical features. However, here, we will consider the number of grammatical features *in common*. For example, the pre-vocalic masculine adjective *bel* shares all of its grammatical features with the pre-consonantal/isolation form *beau*, and all but one (gendre) with the feminine *belle*.

OO Faithfulness constraints can be defined thus:

Let $<$ be the order defined on the paradigm. Let X be the form under evaluation.

(11) MAX-OO: If $Y < X$ and $\nexists Z$ such that $Y < Z < X$, then every segment in Y has a correspondent in X.

(12) DEP-OO: If $Y < X$ and $\nexists Z$ such that $Y < Z < X$, then every segment in X has a correspondent in Y.

(13) IDENT-OO(ϕ): Let α be a segment in X. If α has a correspondent β in Y, and $\forall Z$ such that Y < Z < X, α does not have a correspondent in Z, then α has the same value for feature ϕ as β

These all essentially mean: the "base" is the closest form in the paradigm. This predicts that OO-correspondence cannot be done with just any two forms.

Of particular interest is the IDENT constraints. The idea is that rather than looking at the closest word in the paradigm and comparing every segment, instead we compute the closest form for each segment: the closest correspondent. If there is no correspondent in the closest form, we look to the next closest form. Only if there are no forms with a correspondent is the IDENT constraint vacuously obeyed for that segment.

7 French "split base"

Let us now turn to the French split base forms. While it is possible and even probable that much about the current paradigm and liaison forms are memorised and historical, we would still like a mechanism by which they might have arisen in the first place. This version of OO-correspondence can account for the French split base forms.

Let the orderings on paradigms be defined as above: by the proportion of morphological features in common. We define an order for each lexical item, with that item at the top of the order. For a form under evaluation X, X is added to the top of the order for the paradigm member it is closest to. However, since we are comparing *different* outputs, we much insist that the order be asymmetric: if $a < b$ then $b \not< a$. We stipulate then that the form under evaluation is strictly greater than the lexical item whose order it has been connected to; otherwise we would simply compare it to itself.

For example, suppose we are interested in the liaison form of *bon*. The order with *bon* at the top is {⟨bõ (m,sg), bɔn (f,sg)⟩, ⟨bõ (m,sg), bõ (m,pl),⟩, ⟨ bɔn (f,sg), bɔn (f,pl)⟩}. Suppose we are evaluating the candidate bõn. We add ⟨bõn, bõ ⟩ to the order. Orders are transitive, so the form under evaluation is also ordered above the feminine and plurals.

Now, [$b_1õ_2n_3$] violates DEP-OO because it has an epenthesised consonant. To determine this violation, we look at the closest form in the order: the masculine singular (citation) [$b_1õ_2$]. n_3 has no correspondent.

[$b_1õ_2n_3$] does not violate IDENT-OO because the closest correspondent for n_3 is in the feminine form [$b_1o_2n_3$], and they share all their features. Let us look at a tableau.

(14)

/bõ ami/		*HIATUS	IDENT-OO	DEP-IO	DEP-OO
a.	bõ ami	*!			
b. ☞	bõn ami			*	*
c.	bɔn ami		*!	*	*
d.	bõw ami		*!	*	*

Candidate a violates *hiatus. Candidate c violates IDENT-OO(nasal) because the closest correspondent for $[o_2]$ is in the masculine singular citation form $[b_1\tilde{o}_2]$. Candidate d violates IDENT-OO(lots of features) because the closest correspondent for $[w_3]$ is $[n_3]$ in the feminine singular.

We will need constraints forcing the liaison vowel to be one of {l,n,r,z,t}. I will following Steriade in assuming here that the general familiarity is encoded grammatically, so we do not have to be faithful to, say, *un* "a" when constructing [bõn]; the familiarity with the article is instead encoded as a langauge-specific constraint. Perhaps this version of OO-correspondence could be modified to make it possible to be faithful to privileged but unrelated forms, but I will not attempt that here. Instead, I will appeal to a family of DEP constraints referencing natural classes to isolate these consonants.

(15)
a. DEP-IO(LAB)
b. DEP-IO(DOR)
c. DEP-IO(d)
d. DEP-IO(s)
e. DEP-IO(+COR+ANT)

a-d are not crucially ranked with respect to each other, but they are ranked above the IDENT-OO constraints, which is in turn ranked above DEP-IO(+COR+ANT).

(16)

/gro avãntaʒ/		*HIATUS	DEP-IO(LAB)	DEP-IO(DOR)	DEP-IO(S)	DEP-IO(D)	IDENT-OO(MOST)	IDENT-OO(VOICE)	DEP-IO(COR)
a.	gro	*!							
b.	gros				*!				*
c. ☞	groz							*	*
d.	grot						*!		*
e.	grop		*!				*		
f.	grog			*!			*		

Again, (a) violates *HIATUS. (e) and (f) epenthesise labial and dorsal consonants. (b) illegally epenthesises an [s]. (d) epenthesises a coronal that is not a [d] or [s], so it passes the first muster. However, the epenthesised consonant must be faithful in all its features except [voice] to its nearest correspondent. $[t_4]$ has no correspondent in $[g_1r_2o_3]$ but it does in the feminine $[g_1r_2o_3s_4]$. [t] violates, among other things, IDENT-OO(CONTINUANT). Candidate (c), our winner, violates IDENT-OO(VOI): surface [z] differs from feminine [s] only in voicing. However, all other viable candidate have already lost.

7.1 Variation

Why does this split base phenomenon not happen all the time? Sometimes we have total suppletion of the feminine form, rather than the split base. In the case of sets like *beau/belle/bel* in which the masculine hiatus form sounds exactly like the feminine form, it seems quite clear that the feminine form is memorised as the masculine hiatus form. It even has its own spelling. The split base form *[bol] is completely impossible. In this case, then, the masculine hiatus is not being derived from the masculine citation form with reference to the feminine citation form. Rather, it is pre-existing, and so the masculine citation form will not be the word picked for the sentence.

What, though, of the free variation Isabelle displays? For example, Isabelle allows the masculine citation and split base forms for *gros*. The former violates *HIATUS. Variable ranking of *HIATUS can accomplish this.[2] If *HIATUS can also be ranked at the bottom of the tableau in (16), clearly (a) [gro] will win.

What of free variation between the split base and feminine suppletion? Since split base phenomena are not very common in general, even though OO-correspondence and morphological paradigms are universal, perhaps there is a constraint against cobbling together outputs from multiple sources.

Let X be the form under evaluation, and Y and Z be in the paradigm under consideration. Let R be the correspondence relation. Let $\phi(\alpha) \in \{+, -, 0\}$ according to the value α has for feature ϕ.

(17) IDENT-OO($\forall$): Let Y be such that $\forall\alpha \in X, \exists\alpha' \in Y$ such that $\langle\alpha, \alpha'\rangle \in R_{X,Y}$. Then $\forall\langle\alpha, \alpha'\rangle \in R_{X,Y}, \forall\phi, \phi(\alpha) = \phi(\alpha')$

This constraint essentially means: be faithful to something already in the paradigm. The first part selects the form to be faithful to: something in which the candidate has a correspondent for every segment. The second part says that the candidate much be identical to that form by being featurally identical for every correspondent.

If IDENT-OO($\forall$) is ranked above the DEP-IO constraints but below *HIATUS, only suppletion will be permitted to solve the hiatus problem.

Free variation between the feminine and the split base can be achieved by variable ranking between IDENT-OO($\forall$) and some IDENT-IO constraints. Tableau (18) has IDENT-OO($\forall$)> IDENT-IO and tableau (19) has IDENT-IO > IDENT-OO($\forall$)

[2]Other versions of variability in OT surely have something to say; further research is needed.

(18)

/sudã are/	*HIATUS	IDENT-OO(∀)	IDENT-IO	DEP-IO(S)	DEP-IO(D)	DEP-IO(LAB)	DEP-IO(DOR)	IDENT-OO(MOST)	IDENT-OO(VOICE)	DEP-IO(+COR+ANT)
a. sudã are	*!									
b. sudãn are		*!*								*
c. ☞ sudɛn are			*							*
d. sudãp are		*!***...				*		***...	*	

(19)

/sudã are/	*HIATUS	IDENT-IO	DEP-IO(S)	DEP-IO(D)	IDENT-OO(∀)	DEP-IO(LAB)	DEP-IO(DOR)	IDENT-OO(MOST)	IDENT-OO(VOICE)	DEP-IO(+COR+ANT)
a. sudã are	*!									
b. ☞ sudãn are					**					*
c. sudɛn are		*!								*
d. sudãp are					***!*...	*		***...	*	

We now have ways to derive the free variation we see.

(20) a. *HIATUS, IDENT-IO > IDENT-OO(∀), DEP-IO(+COR+ANT) → split base
b. *HIATUS, IDENT-OO(∀)> IDENT-IO → feminine suppletion
c. DEP-IOS > *HIATUS→ hiatus

Notice that with IDENT-OO(∀)in the picture, the specific DEP-IO constraints to force the epenthesised consonant to be in the set {l,n,r,z,t} become less crucial. Except in the cases where feminine /s/ surfaces in the liaison as [z] and /d/ as [t], random epenthesis will violate IDENT-OO(∀) more times than faithful epenthesis. For example, [sudãp] violates IDENT-OO(∀) for each feature by which [p] differs from [n], such as [LAB], [continuant], and [voice]. We need only rank DEP-IO(s) and DEP-IO(d) above IDENT-OO(∀).

However, we have no way to derive the *variation* in the free variation that Isabelle shows. As we saw, Isabelle accepts the hiatus and split forms for some adjectives, the feminine and split for others, and all three for still others. We have also not addressed the judgements other than 1 (bad) and 7 (good). Non-discrete judgements cannot be handled in the framework I am using here.

However, the hypothesis is that speakers with split base forms nowadays are not creating them on the fly; rather they are memorised like *bel* and *nouvel*. The purpose of this OO-correspondence approach was to show how split base forms might have arisen in previous generations' grammars.

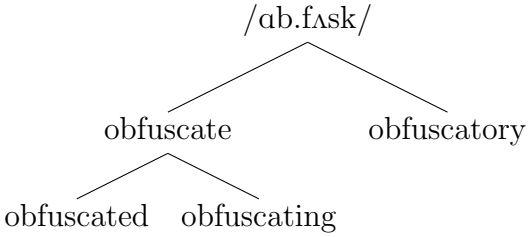
8 Order on the English stress patterns

Steriade does not only propose Lexical Conservatism for French. She looks at two other phenomena, including English stress as discussed at the beginning of this paper. If we can

define an order on the derivational paradigms, we can apply this OO-correspondence to English as well. I lack the space to lay out a full proposal, but let me sketch the basic idea.

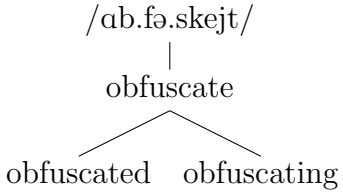
Suppose a learner posits a stem cobbled together from forms she knows. Then the steps in derivation from the stem to the derived form will form a partial order. If we can map this partial order to an asymmetric order, the grammar will know which forms are "closest", and can use OO-correspondence.

This tree represents the partial order for the paradigm of *obfuscate* for a speaker that knows *obfuscatory*. The speaker, due to these two forms, has formed a stem /obfusc/

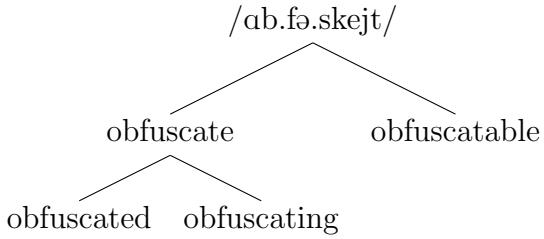


If we assume, as looks to be the case, that *-able* attaches directly to stems, then the candidate [əb.fʌ́.skə.bəl] is added as daughter to the stem. I propose that the closest node to node X is X's mother. The second closest is X's sister. After this, the order can be defined in a number of ways; I leave it up to empirical research to figure out what it is. Now, since we are interested in OO-correspondence, we skip right past the mother in this case: it is not an output. We look instead to the sisters. *obfuscatory* can be faithful to either sister: *obfuscate* or *obfuscatory*. The latter will win because it will not violate *LAPSE$\sigma\sigma\sigma$

A speaker who does not know *obfuscatory* will have no reason to posit the root /ɑb.fʌsk/. She will instead posit /ɑb.fə.skeijt/. Her paradigm wil look like this:



When she adds *obfuscatable* to the tree, it will have only one sister to be faithful to: *obfuscate*.



The speaker cannot create a prosody that does not violate *LAPSE$\sigma\sigma\sigma$ without violating various FAITH-OO constraints. She will produce the faithful but marked [ɑ́b.fə.skej.tə.bəl].

9 Conclusion

We have seen that there is little regularity in the productivity of split base forms, and that they freely vary with one or both of the citation forms. It seems likely that current speakers are not producing these split forms in their grammar, but are instead memorising them.

In order to account for their existence in the first place, I proposed a version of OO-correspondence that can take anything in the paradigm to be a "base", as long as an order can be defined on the paradigm so that the grammars knows which forms to be faithful to when.

Unexplored here is the relationship between constraints on syllable structure and non-split-base forms. Steriade notes that for some of the forms in question, the split-base form violates syllable constraints. For example, in the split-base form of *soudain* [su.dãn] a nasal vowel appears in the same syllable as a nasal consonant, which is normally prohibited. Some of the free variation might then arise not from the variable ranking of IDENT-OO(∀) but from the variable ranking of the syllable constraints. This is very much worth exploring, but I lack the space here. We will likely still want IDENT-OO(∀) available in general to constrain against split-base forms, since they are uncommon.[3]

10 Appendix: Raw Data

1. C'est une bonne idée.

   7 bɔ.ni.de 1 bɔ̃.ni.de

2. Regard le bonhomme de neige!

   3 bɔ.nɔm 3 bõ.nɔm 1 bɔ̃.nɔm 7 bo.nɔm 1 bõ.om

3. Il est un bon ~~homme~~ ami.

   7 bɔ.ami 7bõ.ami 1bɔ̃.ami 1bo.ami 3bõ.ami

4. Il est un gros ~~homme~~ avantage

   7 gro.a.vã.taʒ 1 gro.sa.vã.taʒ 7 gro.za.vã.taʒ 1 grɔ.sa.vã.taʒ 1 grɔ.za.vã.taʒ

5. Les faux-amis

   7 fo.za.mi 1 fo.a.mi 1 fo.sa.mi

6. ~~un~~ haut ~~désire~~

   7 o 1 ɔ

7. une haute chaise

   7 ɔt chaise 1 ot chaise 1 ɔ chaise 1 o chaise

[3]Actually, I now suspect that the best way to account for the French data is with these constraints on syllable structure, but I'm quite out of time!

8. une haute idée

   7 ɔ.ti.de 3 o.ti.de

9. un haut idéal NOTE: un idẽal haut: 7

   1 ɔ.ti.de.al 1 o.ti.de.al 1 ɔ.i.de.al 5 o.i.de.al

10. longtemps – ??

    _____lõ.tã _____lõŋ.tã _____loŋ.tã _____lon.tã _____lɔ̃.tã _____lɔ̃ŋ.tã _____lɔŋ.tã _____lɔn.tã

11. de longue durée – ??

    _____lõ _____lõŋ _____loŋ _____lon _____lɔ̃ _____lɔ̃ŋ _____lɔŋ _____lɔn

12. long intérêt – ??

    _____lõ _____lõŋ _____loŋ _____lɔ̃ _____lɔ̃ŋ _____lɔŋ

13. une longue année – ??

    _____lõ _____lõŋ _____loŋ _____lɔ̃ _____lɔ̃ŋ _____lɔŋ

14. un mauvais garçon

    7 mo.ve.gar.sɔ̃ 1 mo.vɛ.gar.sɔ̃ 1 mo.vez.gar.sɔ̃ 1 mo.vɛz.gar.sɔ̃

15. une mauvaise fille

    1 mo.vez.fi 7 mo.vɛz.fi 1 mo.ve.fi 1 mo.vɛ.fi

16. un mauvais enfant

    5 mo.ve.zã.fã 7 mo.vɛ.zã.fã 1 mo.ve.ã.fã 1 mo.vɛ.ã.fã

17. une mauvaise idée

    _____mo.ve.zi.de _____mo.vɛ.zi.de _____mo.ve.i.de _____mo.vɛ.i.de

18. un sot chat NOTE: un chat sot – 7

    6 so 1 sɔ

19. une sotte fille

    1 sot 7 sɔt

20. un sot ami NOTE: un ami sot - 7

    1 so.ta.mi 1 sɔ.ta.mi 5 so.a.mi 1 sɔ.a.mi

21. une sotte amie

    1 so.ta.mi 7 sɔ.ta.mi

22. un vilain garçon

    7 vɪ.lã 1 vɪ.lɛn 1 vɪ.lãn

23. une vilaine fille

    1 vɪ.lã (ã?) 7 vɪ.lɛn 1 vɪ.lãn

24. un vilain enfant

    7 vɪ.lã.nã.fã 7 vɪ.lɛ.nã.fã 5 vɪ.lã.ã.fã

25. mon ancien prof

    7 ã.sjã 1 ã.sjãn 1 ã.sjɛ 1 ã.sjɛn

26. mon ancienne blonde

    1 ã.sjã 1 ã.sjãn 1 ã.sjɛ 7 ã.sjɛn

27. mon ancien élève

    5 ã.sjã.e.lɛv 7 ã.sjã.ne.lɛv 1 ã.sjɛ.e.lɛv 7 ã.sjɛ.ne.lev 1 ã.sjɛ̃.ne.lev

28. mon ancienne amie

    1 ã.sjã.a.mi 1 ã.sjã.na.mi 1 ã.sjɛ.a.mi 7 ã.sjɛ.na.mi

29. certain... (I couldn't come up with a good phrase)

    Isabelle: un certain enfant:

    7 cɛr.tã.nã.fã 4 cɛr.tɛ.nã.fã

30. ~~1999 a été le dernier an du siècle~~ le dernier enfant

    ? dɛr.nje.rã.fã 7 dɛr.njɛ.rã.fã 1 dɛr.nje.ã.fã

31. 1999 a été la derniere année du siècle

    1 dɛr.nje.ra.ne 7 dɛr.njɛ.ra.ne

32. un franc entretien

    7 frã.ãtrə.tjã 1 frãʃ.ãtrə.tjã 1 frãk.ãtrə.tjã

33. un soudain arrêt NOTE: un arrêt soudain is better

    1 su.dɛ̃.a.re 1 su.dɛ̃.na.re 6 su.dã.na.re 1 su.dã.a.re 6 su.dɛ.na.re

34. le divin enfant NOTE: Isabelle knows and immediately thought of the carol *Il est né, le divin enfant*, usually sung [divin] (feminine form)

    7 di.vi.nã.fã 5 di.nã.nã.fã 4 di.vã.ã.fã

35. un divin idéal

    5 di.vi.ni.de.al 1 di.vã.ni.de.al 5 di.vã.i.de.al

36. un commun accord

    1 ko.my.na.kor 4 ko.mø.a.kor 7 ko.mø.na.kor

37. mon premier amour

    4 prə.mje.a.mur 7 prə.mje.ra.mur 7 prə.mjɛ.ra.mur

38. un serain esprit NOTE: un esprit serain – 7

    1 sə.rã.ɛ.spri 1 sə.rã.nɛ.spri

ADDED:
un fin interprêt
3 fin 5 fã 1 fãn

References

Kager, René. 1999. *Optimality theory*. Cambridge University Press.

Steriade, Donca. 1998. Lexical conservatism in French adjectival liaison. In *Formal perspectives on romance linguistics*, ed. Lisa A. Reed J.-Marc Authier, Barbara E. Bullock, Current Issues in Linguistic Theory. Amsterdam studies in the theory and history of linguistic science.

Steriade, Donca. 2000? Lexical conservatism and the notion of base of affixation. Available on her webpage: http://web.mit.edu/linguistics/people/faculty/steriade/publications.html.