Input-Truncatum Faithfulness in English Hypocoristic Names*

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Hwangbo, Young-Shik. 2002. **Input-Truncatum Faithfulness in English Hypocoristic Names.** *Korean Journal of English Language and Linguistics* 2-2, 287-304. Truncated forms (truncata) in English hypocoristic words have been argued to be faithful to their bases. This means that "... the base of truncation is an output form" (Benua 1995:6,12). For example, in some non-rhotic dialects where syllable-final [r]s are deleted, the [r]s of truncated names such as *Gar* [gær] (truncated form of *Garry* [gæri]) are not deleted although they are syllable-final. This is an example of base-truncatum identity. That is, the syllable-final [r] is retained to make the truncatum more faithful to its base. However, there are many English hypocoristic names which are not faithful to their base forms. For example, *Letty* ['lɛɾi] (hypocoristic form of *Latitia* [lə'tɪʃə]) is not faithful to its base; the first vowel and the second consonant of the truncatum are not identical to the corresponding segments of the base. It will be argued, therefore, that some truncated forms are more faithful to the inputs than the bases. It will also be argued that McCarthy and Prince's (1995) Full Model is needed to deal successfully with all the phenomena related to truncation.

1. Introduction

Morphological truncations, including English hypocoristic names, were an object of concern in Prosodic Morphology, and they have aroused a great interest in Optimality Theory with respect to Output-Output correspondence since Benua (1995).

There are many issues related to English truncated names.

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Some of them are listed below:

(1) a. which portion of the source word is selected (stressed, initial, or final portion)?
b. what are the restrictor constraints which control the shape of the truncated form (Diyary in McCarthy and Prince 1994; Japanese truncation in Benua 1995, Spanish truncation in Piñeros 1999; German truncation in Itô and Mester 1997 among others).
c. The last one is about identity effects between base forms and truncated forms (Benua 1995).

In this paper we will focus on the identity effects, without considering the other two issues.

The purpose of this paper is to review Benua's (1995) model on identity effects in which the bases of truncation are argued to be output forms (Benua 1995:12) and to show that truncated forms are sometimes more faithful to inputs than the outputs. This leads us to adopt the Full Model of Correspondence Theory (McCarthy and Prince 1995).

This paper is organized as follows. In section 2, five phonological phenomena related to truncated forms will be presented. In the next section, Benua's (1995) model for truncation will be introduced and reviewed. In section 3, McCarthy and Prince's (1995) Full Model is advocated as the adequate model for truncation in English hypocoristic names. Section 4 concludes this paper.

2. Related phonological phenomena

In this section, we will consider five phonological phenomena related to truncated forms. The first one is æ-Tensing in a closed syllable observed in New York/Philadelphia dialects:

(2) æ-Tensing (New York/Philadelphia dialects; Benua 1995)
   a. *æC]$_{\sigma}$ where |C| > |-cont, -vc|
   b. normal application in non-truncated forms
      man [mEn][1)]
      plan [plEn]
   c. underapplication in truncated forms
      Pamela [pæmələ] Pam [pæm] *[pEm]
      Janice [dʒænɪs] Jan [dʒæn] *[dʒEn]

Consider the first example in (2c). æ-Tensing does not apply to the truncated form *Pam* [pæm] although [æ] appears in a closed syllable. In other words, æ-Tensing is underapplied in truncated forms.

The second one is æ-Backing in (3) which prevents vowel [æ] from appearing before a tautosyllabic [r] sound:

(3) æ-Backing (Benua 1995)
   a. *ær(C)]$_{\sigma}$ (cf. *ɛr(C)]$_{\sigma}$)
   b. normal application in non-truncated forms
      [kɑr] *[kær]
      [kɑrd] *[kærd]
      [kæri]
   c. underapplication in truncated forms
      Larry [læri] Lar [lær] *[lɑr]
      Harry [hæri] Har [hær] *[hɑr]
      Sarah [særə] Sar [sær] *[sɑr]

Let us look at the first example in (3c). In the truncated form of *Lar* [lær], æ-Backing is not applied although vowel [æ] occurs before a tautosyllabic [r]. This is also a case of under-

[1]The tensed allophone [E] is phonetically [æə̯], that is, a diphthong that begins with a front vowel higher than [æ] and ends in a centralized glide, (Benua 1995; Silverman 2000).

application.

Next, coda-r deletion, which is found in non-rhotic dialects such as London dialect, is also underapplied in truncated forms. The following data are from eight- to ten-year-old children in Dagenham (formerly in Essex, now in north-east Greater London; Gutch 1992:569). A similar phenomenon is reported in Benua (1995:fn.3).

(4) r-Deletion (London dialect: Gutch 1992:569)

a. *r(C)]$_{\sigma}$

b. underapplication in truncated forms

Garry [gærɪ]	Gar [gær]	Gar's [gærz]
Terry [tɛrɪ]	Ter [tɛr]	Ter's [tɛrz]
Darren [dærən]	Dar [dær]	Dar's [dærz]

In (4b), we find that truncated forms such as *Gar* [*gær*] have [r] in the coda position, violating r-Deletion.

In (5) we observe the fourth phonological phenomenon, called Flapping:

(5) Flapping (Hale, et al. 1997)

a. *Vt V

b. normal application in truncated forms

Peter	['pi:ɾər]	Petey	['pi:ɾi]	Pete ['pi:t]
Judith	['dʒu:ɾiθ]	Judy	['dʒu:ɾi]	Jude ['dʒud]
Letitia	[lə'tɪʃə]	Letty	['lɛɾi]	

In the base forms, Flapping occurs since the condition for it is met. Flapping applies in truncated forms such as *Petey* [pi:ɾi] where the condition is met. It does not occur in truncated forms such as *Pete* [pi:t] where the condition is not met. This is, therefore, a case of normal application.

The next phonological phenomenon is Vowel reduction:

(6) Vowel Reduction (Hale, et al. 1997)
   a. Unstressed vowels must be reduced.
   b. Normal application in truncated forms

Jerome	[dʒəˈroʊm]	Jerry	[ˈdʒɛri]
Patricia	[pəˈtriːʃə]	Pat	[ˈpæt]
Emily	[ˈɛməli]	Milly	[ˈmɪli]

Vowel reduction is normally applied in the base forms and truncated forms. In other words, it is applied whenever the condition is met.

To summarize, the truncated forms in (2)-(4) resemble their base forms; that is, they show the so-called identity effects. However, those in (5) and (6) do not.[2)]

3. Benua's Proposal

Now we will present two proposals which try to account for the above phenomena in Correspondence Theory. The first one, Benua's (1995) proposal, will be presented and reviewed in this section, while the other alternative proposal will be dealt with in the next section.

Benua claims: "... there is no correspondence relation between

[2]There are other phenomena of this sort: *Patricia* [pʰəˈtʰrɪʃə] ~ *Pat* [ˈpʰæt̚], *Cabbott* [ˈkʰæbət] ~ *Cab* [ˈkʰæb̚], and *Melanie* [ˈmɛlәni] ~ *Mel* [ˈmɛɫ] (Silverman 2000). Silverman points out that these phenomena, including Flapping and Vowel Reduction, induce alternation, while æ-Tensing does not. Though [æ] and [E] are lexically in complementary distribution, they do not alternate with each other synchronically. Thus, it is natural that they do not alternate in the truncated forms. æ-Backing, which is not dealt with by Silverman, may belong to this category. It is also natural that those alternations involved in Flapping and Vowel Reduction occur in truncated forms, because they occur elsewhere. On the base of the above observation Silverman argues that there is no unexpected underapplication or overapplication. This kind of explanation, however, does not succeed in r-Deletion. [r] and ∅ alternate in non-rhotic dialects, but this alternation is unexpectedly blocked in truncated forms.

the input and the truncated output form. This predicts that truncated words will never be more faithful to the underlying stem than the base is" (Benua 1995:6). This means that "... the base of truncation is an output form." The correspondence relations Benua assumes are shown diagrammatically in (7a).

(7) a. *Input*

IB

Base —— *Truncated*

BT

b. Over- or underapplication

Faith-BT 》 Phon 》 Faith-IB

In this model, under- or overapplication results from the constraint ranking in (7b). In this ranking, phonological changes, occurring in the base due to the ranking Phon 》 Faith-IB, can be transmitted to satisfy the higher ranking constraint Faith-BT. If the condition to phonological change is present only in truncated forms, the expected change will be blocked to satisfy the higher ranking Faith-BT.

Now, let us consider a specific example, æ-Tensing, in (8):

(8) æ-Tensing: *under*application

a. pæmələ/pEmələ

IB

pæmələ —— pæm

BT

b.

Base: [pæmələ]	Ident(tense) -BT	æ-Tensing	Ident(tense) -IB
☞ pæm		*	
pEm	*!		

The first candidate in (8b) is optimal although it violates æ-Tensing, because it obeys higher constraint Faith-BT. To put it

another way, æ-Tensing is blocked in the truncated form [pæm] to preserve the vowel [æ] of the base form.

In the truncated form considered above, æ-Tensing is blocked or underapplied even though they have a triggering environment. However, in the affixed words such as *classy*, it overapplies as shown below:

(9) æ-Tensing: *over*application

a. klæs i

IB | | IB

klEs ——— klE.s i

BA

b.

Input: /klæs/	Ident(tense) -BA	æ-Tensing	Ident(tense) -IB
☞ klE.si			
klæ.si	*!		

The derived word *classy* does not have a condition for æ-Tensing because the relevant syllable is not closed. The first vowel of *classy* is tensed only to preserve the tensed vowel /E/ of the base *class* [klEs].

æ-Backing and r-Deletion show the same identity effects as æ-Tensing, as illustrated below in (10) and (11):

(10) æ-Backing: underapplication

a. hæri

IB |

hæri ——— hær

BT

b.

Base: [hæri]	Ident(V)-BT	æ-Backing	Ident(V)-IB
☞ hær		*	
hɑr	*!		

(11) r-Deletion: underapplication

a. gæri

IB |

gæri ——— gær
BT

b.

Base: [gæri]	Max(C)-BT	r-Deletion	Max(C)-IB
☞ gær		*	
gæ	*!		

In summary, identity effects are obtained by the overall ranking schema shown below:

(12) Faith-BT 》 Phon 》 Faith-IB

However, this model runs into non-trivial problems when we consider examples in (13), (14), and (15), which do not show identity effects. In the following tableaux, Faith-BT constraints are demoted below Phon constraints to avoid identity effects.

(13) Flapping: normal application

a. pi:tər

IB |

pi:ɾər ——— pi:t
BT

b.

Base: [pi:ɾər]	Flapping	Ident(C)-IB	Ident(C)-BT
? pi:ɾ			
pi:t			*!
pi:d			*!

Note that, in (13a), the base does not have [t]. So the desired truncated form [*pi:t*] is wrongly ruled out by Ident(C)-BT, as shown in tableaux (13b). A more serious problem is that there is no reranking option for us to take in order to rule out *pi:ɾ*.[3)]

In the following example, the truncated form has a trigger to flapping:

(14) Flapping: normal application

a. lɛtɪʃə

IB |

lə'tɪʃə ——— 'lɛɾi
BT

b.

Base: [lə'tɪʃə]	Flapping	Ident(C)-IB	Ident(C)-BT
? lə'tɪ			
'lɛɾi			*!
'lɛtɪ	*!		

The first candidate *lə'tɪ* is the most harmonic since it does not incur any violation. It is not actual output, however.[4]

The same thing occurs in (15).

(15) V-Reduction: normal application

a. dʒɛroʊm

IB |

dʒə'roʊm ——— 'dʒɛri
BT

b.

Base: [dʒəroʊm]	V-Reduction	Ident(V)-BT	Ident(V)-IB
? dʒə'ri			
'dʒɛri		*!	
'dʒæri		*!	

The first candidate *dʒə'ri* might be ruled out by prosodic

[3]We might posit a markedness constraint *ɾ between Flapping and Ident(C)-IB to rule out **pi:ɾ*. This cannot be successful, however, since the remaining candidates tie on Ident(C)-BT.

[4]It might be ruled out by other constraints such as FtBin and NonFin. But see the agrument below (15).

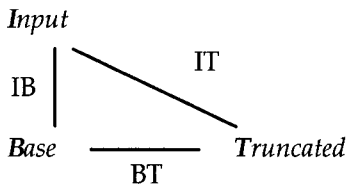
constraints such as FtBin and NonFin. However, there is no way to decide between *ˈʤɛri* and *ˈʤæri*. Here, again, any reranking does not work.

In summary, the problem of Benua's (1995) model is that normal application cannot be explained since there is no correspondence between inputs and truncated forms. To solve this problem, we need a model where there is a correspondence between inputs and truncated forms. I will present an alternative model in the next section.

4. McCarthy and Prince's Full Model

In this section we will argue that McCarthy and Prince's (1995) Full Model is necessary to explain the phonological phenomena in truncated forms. McCarthy and Prince's Full Model, adapted for truncation, is presented in (16):

(16) Full Model (McCarthy and Prince 1995)

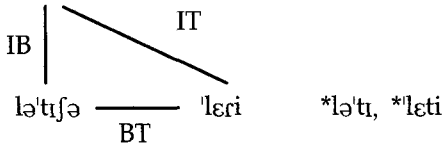


The diagram in (16) shows that there is another correspondence relation between input forms and truncated forms.

Now we will show how this model accounts for normal application of some rules which Benua's model cannot deal with. Consider first Flapping:

(17) Flapping: normal application

a. lɛtɪʃə



b.

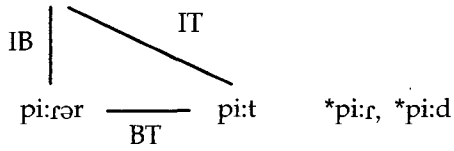
	Flapping	Ident(C)-IT	Ident(C)-BT
☞ 'lɛɾi		*	*
'lɛti	*!		

This tableau shows that Flapping must dominate both Ident(C)-IT and Ident(C)-BT. If either Ident(C)-IT or Ident(C)-BT dominated Flapping, then **'lɛti* would be selected as an optimal form. An unlisted form **lə'tɪ* may be ruled out by other foot-form related constraints such as FtBin and NonFin. It can also be ruled out by Ident(V)-IT as shown below in V-Reduction cases.

Another example to be considered with regard to Flapping is given below:

(18) Flapping: normal application

a. pi:tər



b.

pi:tər	Flapping	Ident(C)-IT	Ident(C)-BT
☞ pi:t			*
pi:ɾ		*!	
pi:d		*!	*

Here we can find that Ident(C)-IT must dominate Ident(C)-BT since the reversed ranking comes up with an undesirable output **pi:ɾ*.

It is obvious that Ident(C)-IB is dominated by Flapping since

flapping occurs in non-derived words generally in English. If Ident(C)-IB were ranked below Ident(C)-BT, the changes in a truncated form would be copied back to its base. Since this is not the case, Ident(C)-IB must be ranked above Ident(C)-BT.

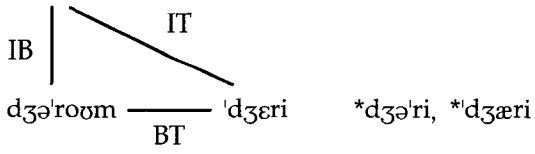
The above argument lead to the ranking shown below:

(19) Normal application of Flapping
Flapping 》 Ident(C)-IB, Ident(C)-IT 》 Ident(C)-BT

V-Reduction is another example of normal application in truncated forms. Let us look at (20):

(20) V-reduction: normal application

a. dʒɛroʊm



b.

	V-Reduction	Ident(V)-IT	Ident(V)-BT
☞ ˈdʒɛri			*
dʒəˈri		*!	
ˈdʒæri		*!	*
dʒɛˈri	*!		*

Notice that the second and third candidates lose the competition on Ident(V)-IT. This means that the vowel [ɛ] in the optimal form *ˈdʒɛri* is guaranteed by Ident(V)-IT.

If we add Ident(V)-IB as we did in Flapping before, we get the following constraint ranking with regard to V-Reduction:

(21) Normal applicantion of V-Reduction
V-Reduction 》 Ident(V)-IB, Ident(V)-IT 》 Ident(V)-BT

If we put the rankings in (19) and (21) together we obtain the

following overall ranking schema for normal application in truncated forms:

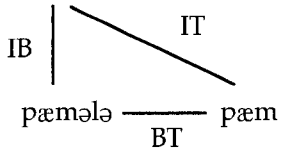
(22) General ranking schema of normal application
Phon 》 Faith-IB, Faith-IT 》 Faith-BT

We have shown that the Full Model can account for normal application cases, which Benua's model cannot deal with. Normal application means that there are no identity effects between bases and truncated forms. However, the phenomena we will consider show identity effects between bases and truncated forms.

Now consider æ-Tensing in (23). If the input is assumed to be /pæmələ/ as in (23b), either Ident(tense)-BT or Ident(tense)-IT must dominate æ-Tensing, to block æ-Tensing in the truncated form [pæm]. If the input is assumed to be /pEmələ/ as in (23c), Ident(tense)-BT must dominate æ-Tensing.

(23) æ-Tensing: underapplication

a. pæmələ/pEmələ



b.

Input: pæmələ	Ident(tense) -BT	æ-Tensing	Ident(tense) -IT
pæm		*	
pEm	*!		*

c.

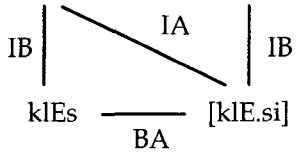
Input: pEmələ	Ident(tense) -BT	æ-Tensing	Ident(tense) -IT
pæm		*	
pEm	*!		

The constraint ranking given above ensures that truncated

forms have the same vowel as that of their bases. However, the above tableaux do not provide a concrete evidence to the place of Ident(tense)-IT in the ranking. The following example, which is not a truncated form but an affixed form, provides a hint that Ident(tense)-IT must be dominated Ident(tense)-BT. In (24), BA indicates the correspondence between Bases and Affixed forms.

(24) æ-Tensing: overapplication

a. klæs/klEs -i



b.

Input: klæs	Ident(tense) -BA	æ-Tensing	Ident(tense) -IA
klæ.si	*!		
☜ klE.si			*

c.

Input: klEs	Ident(tense) -BA	æ-Tensing	Ident(tense) -IA
klæ.si	*!		*
☜ klE.si			

There is no environment for æ-Tensing in the affixed form *classy*, but æ-Tensing occurs. This overapplication is caused by the Ident(tense)-BA, as shown in tableau (24b,c). (24b) shows that Ident(tense)-BA must dominate Ident(tense)-IA. It is plausible, therefore, to assume that Ident(tense)-IT, which is comparable to Ident(tense)-IA, is ranked below æ-Tensing as is Ident(tense)-IB, because Faith-IB and Faith-IT are ranked there in normal application cases (see (22)).

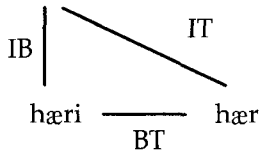
(25) Ident(tense)-BT 》 æ-Tensing 》 Ident(tense)-IB, Ident(tense)-IT

æ-Backing and r-Deletion can be explained in the same way,

as illustrated in (26) and (27):

(26) æ-Backing: underapplication

a. hæri



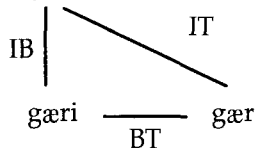
b.

	Ident(back) -BT	æ-Backing	Ident(back) -IT
hær		*	
har	*!		*

The second candidate in (26b) incurs Ident(back)-BT violation, and thus the first candidate is selected as optimal.[5]

(27) r-Deletion: underapplication

a. gæri



b.

	Max(C)-BT	r-Deletion	Max(C)-IT
gær		*	
gæ	*!		*

The first candidate *gær*, which violates r-Deletion, is optimal because it resembles the base *gæri* more than the second candidate *gæ* does.

It has been shown that æ-Tensing, æ-Backing, and r-Deletion underapply (or overapply) to retain identity between bases and truncated (or affixed) forms. It has also been shown that these identity effects are achieved by the general ranking schema given

[5]In this case the position of Ident(back)-IT is irrelevant since its evaluation is always the same as Ident(back)-BT.

in (28):

(28) General ranking schema of *under-/over*application
Faith-BT 》 Phon 》 Faith-IB, Faith-IT

It is important to note that underapplication and over-application are not differentiated by constraint ranking. They are distinguished by which, of the base and the truncated form, contains the structural environment relevant to the Phon constraint (Benua 1995:20).

Normal application in truncated forms are obtained by the following general ranking schema, which is repeated from (22):

(29) General ranking schema of *normal* application
Phon 》 Faith-IB, Faith-IT 》 Faith-BT

Since Faith-BT is ranked in the bottom in this ranking schema, it does not play any active role and does not cause identity effect between bases and truncated forms. It should be noticed that Faith-IT dominates Faith-BT. This domination relation ensures that the truncated forms [pi:t] and [dʒɛri] can have the segments which do not appear in their bases [pi:ɾər] and [dʒə'ro ʊm] respectively.

5. Conclusion

Benua (1995:6) argued that "... there is no correspondence relation between the input and the truncated output form. This predicts that truncated words will never be more faithful to the underlying stem than the base is." This implies that "... the base of truncation is an output form" (Benua 1995:12). In this paper, however, it has been proved that some English hypocoristic names are more faithful to the input forms than Benua (1995)

expected. It has been shown that McCarthy and Prince's Full Model deals with all the phenomena successfully.

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