An OO-analysis of German i-truncations
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This paper argues for an Output-Output (OO)-analysis of phonotactic restrictions in word-medial consonant sequences in one type of diminutive formations in German, so-called "i-truncations". The paper asserts that prior theoretical accounts of the formation of i-truncations in German are not satisfactory. First, we argue that a fundamental change to OT (Optimality Theory), such as Sympathy Theory, is not necessary to account for the phonotactic patterns in German i-truncations (contra Ito & Mester 1997). Second, we argue that German i-truncations and reduplications are *not* the same phenomenon (contra Wiese 2001). We provide evidence against the claim that i-truncations are 'minimal reduplications' (Wiese 2001) despite the fact that i-truncations and reduplications (such as *lari-fari,* '*airy-fairy'*) both have an /i/-morpheme in many instances, and despite the fact that truncation and reduplication processes have been considered closely related processes since Benua (1995).

The term 'i-truncation' refers to a morphological process of diminutive formation by which (usually) multi-syllabic nouns, although not exclusively proper nouns, are truncated and receive a word-final [i]. I-truncations are used as nicknames or as abbreviations for frequently occurring nouns, e.g. [ˈga.bi] for [ga.bri.ˈe.lə] (*proper noun*) and [ˈhaʊ.si] for [ˈhaʊs.aʊf.ga.bə] ('*homework'*), respectively. Regardless of the stress pattern of the base form, all i-truncations are disyllabic trochees in which the second nucleus is an [i].

Crucially, some word-medial consonant sequences of the base forms are kept in the i-truncations (group I), while other sequences are simplified to one consonant (group II) *(data: Ito & Mester 1997, Féry 1997).* Some examples are provided in I) and II) below.

I. <u>Word-medial consonant sequences that are kept in i-truncations</u>

(1)	[ˈgɔ**r**.**b**a.ʧɔf]	> [ˈgɔ**r**.**bi**] (*[ˈgɔ.**ri**])	"Gorbatschow", *proper name*
(2)	[ˈwa**l**.**d**ə.ma]	> [ˈwa**l**.**di**] (*[ˈwa**l**.**li**])	"Waldemar", *proper name*
(3)	[ʔa**l**.**k**ɔ.ˈho.lɪ.kɐ]	> [ˈʔa**l**.**ki**] (*[[ˈʔa**l**.**li**])	"Alkoholiker", *alcoholic (n)*

II. <u>Word-medial consonant sequences that are simplified to one consonant in i-truncations</u>

(4)	[ga.**br**i.ˈe.lə]	> [ˈga.**bi**]	(*[ˈga.**bri**])	"Gabriele", *proper name*
(5)	[ˈʔʊ**l.r**ɪç]	> [ˈʔʊ**l.li**]	(*[ˈʔʊ**l.ri**])	"Ulrich" *proper name*
(6)	[ʔa**n.**ˈ**dr**e.ʌs]	> [ˈʔa**n.di**]	(* [ˈʔan**d.ri**]; * [ˈʔa**n.dri**]; *[ˈʔa**n.ni**])	"Andreas" *proper name*

Ito & Mester (1997:8) suggest that "the truncatum [shortened form without the *–i*] must be the *maximal* syllable extractable from the base". The maximal syllable for [ˈgɔ**r**.**b**a.ʧɔf] ("Gorbatschow"), for example, would be [gɔrb]; the maximal syllable for [ga.**br**i.ˈe.lə] ("Gabriele") would be [gab]. In other words, every phoneme of an i-truncation except for the final [i] constitutes the longest possible syllable that could be extracted from the respective base form. In a Sympathy Theory account, the maximal syllable is the "sympathy candidate". The optimal candidate is the candidate that is most faithful to both the sympathy candidate and the input form. Below is a tableau for diminutive formation of [an.ˈdre.as] ("Andreas", *proper noun*) using Ito & Mester (1997)'s Sympathy Theory account.

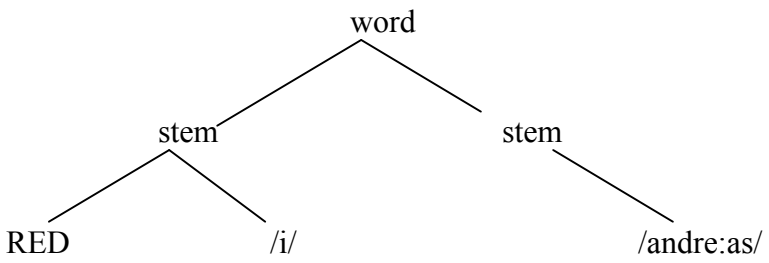
(7) Tableau for an i-truncation with Sympathy Theory (Ito & Mester 1997)

I: / an.dre.as + i/	NonFinality	Dep-❀O	Max-IO	All-σ-Left❀
❀ a. and	*!		reasi	
b. an	*!		dreasi	
c. a	*!		ndreasi	
d. a.n-i		i	dreas!	σ
☞ e. an.d-i		i	reas	σ
f. an.dr-i		ri!	eas	σ
g. an.dre.a.s-i		re!asi		σσσ

Sympathy Theory, however, represents an increased complexity of the grammatical model of OT. Sympathy Theory is dependent upon an additional level of comparison (McCarthy 2002:176) and either the sympathy constraints or the sympathy candidates have to be stipulated. Moreover, sympathy constraints are output-output constraints, but the sympathy candidates in i-truncations are theoretical constructs – the maximal syllable extractable from each base – that do not actually occur as output forms. Additionally, the sympathy candidates must be able to end in voiced consonants – such as [an**d**] – even though the sympathy candidates are output forms, therefore violating final devoicing.

Wiese (2001) argues that truncations are 'minimal reduplications'. Morphologically, i-truncations are argued to be reduplications, but phonologically, the second "stem" is not realized due to prosodic well-formedness conditions that prevent double realization of the material. Therefore, only the RED and the inserted suffix -/i/ are realized phonologically, while the corresponding base is not realized. The morphological structure of i-truncations in Wiese (2001) is illustrated in (8) below.

(8) I-truncations as minimal reduplications (Wiese 2001)



Wiese (2001)'s proposal, however, is not reconcilable with the general assumption that reduplication processes are based on OO-correspondence constraints (Benua 1995). In other words, reduplications are generally conceived of as correspondent relations between the output of the base and the output of the reduplication, not the *input* of the base and the output of the reduplicant.

Moreover, there are several differences between i-truncations and reduplications in German. Unlike i-truncations,

a) reduplications don't always end in [i], e.g.: "hokus-pokus" (*hocus-pocus*);
b) reduplications aren't always disyllabic, e.g: "holter-di-polter" (*helter-skelter*);
c) reduplications aren't always semantically obvious, e.g.: the meaning of "holter" in "holter-di-polter" (*helter-skelter*) is not clear.

German i-truncations can be accounted for by a standard OO-account (cf. Féry 1997), making Sympathy Theory and the analysis of i-truncations as 'minimal reduplications' unnecessary. The unmarked prosodic shape of i-truncations, disyllabic trochaic feet, can be achieved with the constraint ranking in (9).

(9) *Constraint ranking for the unmarked prosodic shape of i-truncations:*

ONS >> MorphReal-IO, Trunc = Stem, Ft-Bin (σσ), All-Ft-L, L-Anchor-BT, Parse-σ >> Max-BT

The phonotactic restrictions in German i-truncation can be explained rather elegantly with the Syllable Contact Principle (*see 10*) (cf. Wiese 2001) and a prohibition of complex margins ("NoComplMargins") in unstressed syllable (*see 11*).

(10) *Syllable Contact Principle* (Murray & Vennemann 1983; Vennnemann 1988, Gouskova 2004, *and others*)
A coda consonant is more sonorous than the following onset consonant.

(11) Vennemann's *Preference Laws for Syllable Structure* # 100 (Vennemann 1988:58)
All syllabic complexities are less disfavored in stressed syllables than in unstressed syllables.

Overall, the restrictions on word-medial consonant sequences in i-truncations can be accounted for with the remaining constraint ranking in (12), which includes the following crucial constraints: the syllable contact principle ("SyllCont") described in (10), the requirement for nasal-consonant sequences to be homorganic ("NasCodaCond") (Féry 1997), and the prohibition of complex margins in unstressed syllables ("NoComplMargins" and "PrefLaw" in 11).

(12) *Constraint ranking for the treatment of consonant sequences in i-truncations:*

PrefLaw, NoComplMargins, NasCodaCond >> SyllCont >> Faith-BT >> NoCoda

The example tableau in (13) illustrates how the syllable contact principle ("SyllCont") and the constraint against complex margins ("NoComplMargins") are able to select [ga.bi] as the winning i-truncation candidate for the name [ga.bri.ˈe.lə] ("Gabriele"). The prosodic constraints are not included in this tableau.

(13) Example tableau for /ga.bri.ˈe.lə/ > [ˈga.bi]

Base: /ga.bri.ˈe.lə/ Input: /TRUNC+ i/	<Prosodic constraints>	PrefLaw *(cf. 11)*	NoCompl Margins	NasCoda Cond	SyllCont	Max-BT	No Coda
☞ a. ˈga.bi	…					*****	
b. ˈga.bri	…		*!			****	
c. ˈgab.ri	…				*!	****	*

To conclude, German i-truncations can be accounted for with a straightforward OO-analysis, without recourse to Sympathy Theory (contra Ito & Mester 1997) and without recourse to an analogy between i-truncations and reduplications (contra Wiese 2001). The crucial aspects of this analysis include the syllable contact principle (Murray & Vennemann 1983, Vennemann 1988, *and others*) and the prohibition of complex margins in unstressed syllables (Vennemann 1988).

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