

in w Zonneveld (1975)

HARRY v.d. HULST
Dept. Gen. Linguistics Leiden
P.O. Box 9515
071-200105

Rule conversion in phonology

HARRY VAN DER HULST

Dutch Lexicological Institute Leiden

0. Introduction¹⁾

Zonneveld (1978a, 251 ff.) correctly points out that two types of rule conversion must be distinguished: rule symmetry and rule inversion. For an 'original rule' of the form:

$$(1) \quad A \rightarrow B / C - D$$

the two types of converted rule look like (2) and (3), respectively:

$$(2) \quad B \rightarrow A / C - D$$

$$(3) \quad B \rightarrow A / C - \bar{D}$$

Rule (2), the symmetrical rule, performs an operation opposite to that of rule (1) in an identical environment, while rule (3), the inverted rule, performs the opposite operation in a complementary environment. Zonneveld (hence Z) uses both types of converted rules in a manner that is not in the spirit of the original proposals.²⁾ Although this is not objectionable in principle, I will demonstrate that in this case Z's adaptation leads to analyses that resist any sensible interpretation and, in addition, are based on disputable facts.

1. Rule inversion

In Vennemann (1972, 1974) rule inversion is regarded as connected with restructuring and as such as part of a complicated type of change involving restructuring, loss of the original rule and addition of the inverted rule. Vennemann distinguishes two subtypes of rule inversion, dependent on the motivation of the change.

In some cases inversion is the direct result of restructuring. When a rule of the form in (1) is added to the grammar and the seg-

ments that are affected happen to be part of the category that is the most basic from a semantic point of view, the most likely candidate for the synchronic reflex of the diachronic rule is a rule like (3).

In other cases inversion is the result of reinterpretation of the alternation that is caused by the original rule. This is the case when this alternation could be interpreted as the result of a hiatus filling rule. The original rule then must be a deletion rule of the following general form:

$$(4) \quad C \rightarrow \emptyset \quad / \quad V \quad - \quad (\#) \quad \begin{Bmatrix} C \\ \# \end{Bmatrix}$$

The resulting alternation may be interpreted as an attempt to avoid V\$V sequences, in accordance with a universal tendency to create syllables of the form \$CV. This then leads to an inverted rule

$$(5) \quad \emptyset \rightarrow C \quad / \quad V \quad - \quad (\#) \quad V$$

and, of course, to restructuring of the words that have lost their final C in the previous stage. This view on the origin of hiatus-filling rules explains the arbitrary nature of the consonant involved.

Despite the fact that both motivations for the subtypes of rule inversion can be found in Vennemann (1972), Z maintains that a motivation for the second subtype is not given in the framework of Vennemann (Z, 254).³⁾ Furthermore, Z does not accept the view that rule inversion, loss of the original rule and restructuring co-occur (Z, 258, 261). It is not clear whether or not Z also refuses to accept the motivation given by Vennemann for the first subtype of rule inversion (cf. below).

Since Z is now faced with a phenomenon - rule inversion - that lacks a motivation, the next step for him is to find one. In a discussion of the 'intrusive r' phenomena in English Z points out that a proper motivation for rule inversion comes from the 'attitude' a language user has towards (the effect of) a particular rule. His claim is that when a rule is approved of this may lead to inversion. To illustrate Z's point let me summarize the data concerning the 'intrusive r' (cf. Vennemann 1972, 216). In certain dialects of English we find the following rule:

$$(6) \quad r \rightarrow \emptyset \quad / \quad V \quad - \quad (\#) \quad \begin{Bmatrix} C \\ \# \end{Bmatrix}$$

This rule creates alternations like in (7):

(7) the wate-r-is the wate the wate may

In other dialects we find the same alternation, though the r that appears before a vowel is in some cases unetymological:

(8) the idea-r-is the idea the idea may

To account for this Vennemann proposes the following development:

(9) Stage I $r \rightarrow \emptyset$ / V - (#) {C,#}
 Stage IIa $\emptyset \rightarrow r$ / V - (#) V
 to certain words (lexically marked)
 Stage IIb $\emptyset \rightarrow r$ / V - (#) V
 to all strings that meet the SD

Z's representation of the data in (7) and (8) is the following (Z, 258):

(10)	/water is/	/water/	/idea is/	/idea/
<u>r</u> -del	-	\emptyset	-	-
approval leads to addition of				
invers	-	-	r	-
output	<u>water is</u>	<u>wate</u>	<u>idear is</u>	<u>idea</u>

So we have a two-rule analysis and there is no restructuring involved, according to Z. The situation that is described here is claimed to be present in New York where we find a group of speakers with a favourable attitude towards r-less speech. Z considers the presence of this positive attitude and the presence of intrusive r's as evidence for his claim that approval leads to inversion. Now it is clear that this claim is ad hoc as long as the only facts to illustrate it are the ones in (7) as found in New York, since these facts have led to the hypothesis in the first place. To judge the value of the claim we must find out whether it makes the right predictions in new cases. In other words, we must find a rule that is approved of and see whether or not we find facts that can be accounted for by an inverse rule. Z mentions one such case (Z, 259-61).

In Dutch we have a rule, called weakening by Z, the application of which is to a large extent 'socially governed' (simplified):⁴⁾

$$(11) \quad d \rightarrow \begin{cases} w \\ j \end{cases} / \quad VV \quad - \quad + \quad V$$

Note, first, that (11) could not be regarded as a hiatus-filling rule (since there is no hiatus), which means that Z's notion 'approval' is not only meant to explain the emergence of this subtype of rule inversion, but (the conclusion must be) any type of inversion. Z then gives the following derivations to illustrate what the outcome could be like if the inverted rule (12) was present

$$(12) \quad \begin{cases} w \\ j \end{cases} \rightarrow d / \quad VV \quad - \quad (\#) \quad \{C, \#\}$$

(13)	/rood/	/rood-e/	/kooi/	/kooi-e/
WEAK	-	j	-	-

approval leads to addition of:

invers	-	-	d	-
output	<u>rood</u> 'red'	<u>rooj-e</u>	<u>kood</u> 'cage'	<u>kooj-e</u>

In Flemisch Dutch, where according to Z, the original rule is "less stigmatized" we would therefore expect to find forms like kood (with unetymological d). Z then refers to several sources that indeed report forms like blaud 'blue' (for Western Dutch blauw).

However, forms like blaud can be explained as the regular outcome of nominative and accusative singular neuter forms of the adjectives involved (cf. Got. blindata), as can be found in Schönfeld, par. 125. This means that the Flemisch facts cannot be used to prove Z's point that approval leads to inversion since the crucial forms need not be (and are probably not) the result of an inverted rule at all (leaving aside whether it is in fact appropriate to equal approval with "less stigmatized").

In addition I find it hard to understand why a language user should create alternations that are similar to those of a rule he approves of. After all it is the output of a rule that may carry prestige not the alternation (if any) that is caused by a rule. The typical reaction to an approved of rule is generalization as will be shown in par. 2.

Does this mean that we have a claim here for which there is

neither positive nor negative evidence? Or can we present some negative evidence as well, i.e. a case where it is indeed unwarranted to speak of 'approval' and where nevertheless the results of an inverted rule can be found? In my opinion we have such a case in Dutch, where a rule, quite similar to r-del, is operative, viz. n-del (informally):

$$(14) \quad n \rightarrow \emptyset \quad / \quad - \quad (\#) \quad \left\{ \begin{array}{c} C \\ \# \end{array} \right\}$$

One cannot say that the overall attitude towards this rule is favourable. Now despite the fact that n-del is certainly no prestige pronunciation we do find intrusive n's in Dutch, as is reported in Leenen 1958: meende-n-ik '(litt.) meant I', werkte-n-ie '(litt.) worked he'. An inverted rule to account for these forms would be something like (15):

$$(15) \quad \emptyset \rightarrow n \quad / \quad - \quad (\#) \quad V$$

This case should be further investigated (with regard to the exact extra- and intralinguistic conditions), yet I regard it as suggestive towards the claim that inversion is not caused by 'approval'. The motivation given by Vennemann for inverted rules of the hiatus-filling type is perfectly reasonable and fully applicable to the Dutch case just described.

My conclusion with regard to Z's proposal concerning inverted rules is that he has not been able to show that inversion results from approval. Moreover, there is some evidence suggesting that it is hopeless trying to prove this point at all.⁵⁾

In the next paragraph we will deal with the other type of rule conversion, viz. rule symmetry, which, according to Z, is related to the notion disapproval. The connection between disapproval and rule symmetry is not controversial, so I will not criticize Z on this point. I will show, however, that accepting this connection has certain consequences neglected by Z, which render the analyses he proposes rather implausible.

Incidentally, it follows from the preceding discussion that an attractive parallelism must be given up. We cannot, like Z, assume that disapproval leads to rule symmetry and approval to rule inversion. However, we find now another inviting parallelism as was point-

ed out by Decamp (1972): both disapproval and approval lead to (rule) generalization.

2. Rule symmetry

We can distinguish two types of hypercorrection, correlated with the notion approval and disapproval, respectively.

As was already indicated in the preceding paragraph, approval of a certain pronunciation leads to generalization (or first addition followed by generalization) of the rule involved. Disapproval leads essentially to the same phenomena, the addition of a symmetrical rule and (most often) generalization of this rule.

Although Z accepts this view, expressed in Decamp (1972), with regard to the motivation of rule symmetry, he does not explain why in his view approval leads to rule inversion rather than to rule generalization. Clearly, Z could only 'use' the first half of Decamp's view in order to establish the nice parallelism mentioned at the end of the preceding paragraph. There is, however, an attractive rationale behind Decamp's view: people 'overdo' things, both when they like it and when they do not like it.

The first discussion (within a generative framework) of symmetrical rules is found in Saporta (1965). I will summarize this discussion in order to have an illustrative example of the possible use of symmetrical rules. Saporta reports the following Spanish data:

(16)	Standard (S)	Familiar (F)	Hypercorrect (H)	
	soldádo	soldáo	soldádo	'soldier'
	bakaláo	bakaláo	bakaládo	'cod'

To account for these data he proposes the following rules. To derive F from S:

(17) $d \rightarrow \emptyset$ / $\check{v} - \circ$

and to derive H:

(18) $\emptyset \rightarrow d$ / $\check{v} - \circ$

There are several possible analyses of the data in (16) either

using both rules, or only one of the two or even no rule at all, the choice being dependent on whether and to what extent one is willing to postulate different underlying forms for the different 'dialects'. I will not evaluate all these possibilities here.⁶⁾

Now, I will briefly summarize the original and, at first sight plausible, suggestion that Z has made with regard to a possible role of symmetrical rules in the emergence of irregular sound changes. After discussing both types of rule conversion, Z notes that the difference in their structural description has an important consequence for their relation to the original rule. While the original rule and the inverted rule work in an environment that is mutually exclusive, the original rule and the symmetrical rule work in the same environment. From this, it follows that the former pair needs no ordering prescription, while the latter does: their application in a different order has consequences for the output. According to a definition of Wang (1969, 18) this means that an original rule and a symmetrical rule stand in a competing relation. In other words, a rule and its symmetrical counterpart, taken as diachronic developments, can be regarded as competing changes. Since competing changes can be the cause of residue (Wang 1969), exceptions to a particular sound change can be explained when we assume that this change has clashed with its symmetrical counterpart. This is a surprising extension of Wang's theory of competing changes as developed in connection with this theory of lexical diffusion. Faced with a sound change that clearly left residue we can now explain the exceptions not only by referring to a competing change in the sense of Wang (1969), but also by 'referring' to a symmetrical rule.

Again Z chooses to illustrate his point with a controversial analysis. In modern Dutch we find alternations like lade - la 'drawer' for which Z proposes a synchronic rule, called contraction, (informally):⁷⁾

(19) $de \rightarrow \emptyset\emptyset \quad / \quad VV \quad -$

We also find words that always have de, e.g. woede 'anger' and words that never have de, e.g. reu 'male dog'. To be more precise, in a corpus of 145 relevant words (i.e. words with de that were present in the language at the time the changes that led to the loss of de were operative) we find the following tripartition (Z, 267):

(20)	never <u>de</u>	:	36
	sometimes <u>de</u>	:	65
	always <u>de</u>	:	44

In addition, historical sources show hypercorrect forms like zeede 'sea' for zee, which however did not survive in modern Dutch. To account for these forms, we need a rule:

(21)	$\emptyset\emptyset \rightarrow de$	/	VV	-
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According to Z, all words with de are counterexamples to the regularity hypothesis: contraction is a sound change with exceptions. At the same time Z also admits that contraction has become unproductive. This strikes me as puzzling. If we assume that a rule has become unproductive, it is inappropriate to regard the unaffected words as 'exceptions' and beside to point to seek for an explanation of these 'exceptions'. We must not explain the 'exceptions', we must explain the fact that the rule has become unproductive. In this particular case the most obvious explanation is that the contraction rule, as formulated in (19) is a telescoped rule.⁸⁾ Schönfeld, par. 34, and 35, suggests the following possible developments:

(22)	(i)	$l\bar{a}de > l\bar{a}-\emptyset > l\bar{a}$
	(ii)	$lade > l\bar{a}je > l\bar{a}j > l\bar{a}$

As is accepted by many phonologists (cf. Hyman 1975: 173-5) rule telescoping results in rule denaturalisation, which in its turn leads to improductivity.

However, apart from throwing doubt on the usefulness of Z's example, the implausibility of his proposal can be established on other grounds. Just like in the preceding paragraph I will present some arguments that vitiate any attempt to look for other, more successful examples. Let us first consider the derivations Z gives to illustrate his claim:

(23)	<u>never de</u>		<u>sometimes de</u>		<u>always de</u>		<u>Hyperc.</u>
	/reude/	/lade/	/lade/		/woede/		/zee/
(21)	--	(21) --	(19) øø	(19)	øø	(19)	--
(19)	øø	(19) øø	(21) de	(21)	de	(21)	de

output reu la lade woede zeede

It appears that forms with and without de are explained as the result of a different order of application. If there were no hypercorrect forms we could simply assume that contraction has stopped halfway, leaving as we would expect forms that are affected, forms that are variably effected and forms that are not affected. However, since there are forms like zeede Z prefers to account for the facts in the above way.⁹⁾

At this point, it might be useful to determine exactly what the competing rules, reported by Wang c.s. (cf. Wang 1977) and Z's 'competing' rules have in common and what not. It is significant that all cases reported in Wang (1977) involve rules that stand in a bleeding relation. This means that one of the rules blocks application of the other. But in derivations that result from two rules that are mutually feeding: no rule is blocked. In fact, nothing stops both rules from re-applying again and again, resulting in what we might call a 'Sisyphus' derivation. Apparently Z wants us to assume that once a rule has been applied to a particular form it may not be re-applied to that form. But the impossibility of re-application does not follow from the fact that the rule is blocked, but simply from an implicit assumption that diachronic rules do not re-apply. In other words, we must accept that diachronic rules behave just like synchronic rules in a particular version of the theory of generative phonology, i.e. the standard theory: a rule works once and only once in a derivation. This is a strange assumption, to say the least. In addition the interaction between two diachronic rules in the sense of Wang is different in another, more principled way from the interaction between an original rule and its converse.

Symmetrical rules are motivated by style shift. This means that the second derivation of lade and that of woede only make sense if we assume that between application of (19) and (21) a style shift occurs. This also explains why reapplication of (19) is unmotivated after

this style shift has occurred. At the style level that is defined by the application of (21) there is no place for rule (19): this is precisely what motivates the existence of a rule like (21). On the other hand the derivation of reude and the first of lade are completely 'unrealistic'. It follows from the function of the symmetrical rule that it is applied to forms that might be the result of the original rule. Surely forms with de are the last to raise this impression. It is clear then that since both rules do not belong to the same style level, they are non-interfering and therefore non-competing.

The formulation of symmetrical rules implies the recognition of style levels within ones theory. It is this implication that Z has obscured. This made it possible for him to create the derivations in (23). However, only rules that belong to the same style level can interact in such a way that two different orders of application emerge. I see no reason why two independent rules, operating at the same time and style level, could not be mutually feeding, but it is simply impossible that one of the rules is the symmetrical counterpart of the other.¹⁰⁾

There is an additional methodological objection against Z's proposal. If we are allowed to explain exceptions as the result of competition between an original rule and its symmetrical counterpart, it does not follow that we have saved the regularity hypothesis. On the contrary, we have made this hypothesis immune for falsification. We can now explain all exceptions as the result of competition, by simply assuming that the original rule was disapproved of. Z tries to avoid this unattractive consequence by stipulating that we are only permitted to use this explanation when hypercorrect forms are attested. However, this restriction is ad hoc in that it lacks independent motivation. In fact, independent motivation argues against it. Hypercorrect forms can only occur if the original rule produces output types that also exist independently of this rule. But this does not mean that symmetrical rules are used only when rules are opaque in the above sense. The idea is that hypercorrect forms prove that in style shift the characteristics of a particular style are undone by inverted rules. I cannot see any reason why this is only true for opaque rules. And if it is not, it follows that the presence of a symmetrical rule need not be apparent from hypercorrect forms at all, which means that we are free to postulate the presence

of symmetrical rules any time.

Before ending this paragraph I want to make one additional point. I do not want to deny that 'social pressure' may influence the generality of a rule in a negative way, just like it may influence it in a positive way.¹¹⁾ However, pressure not to apply a rule in certain circumstances is not confined to sociolinguistic factors alone. Grammatical factors such as meaning or morphological function may influence the application of a rule as well. For instance, the rule of contraction did not apply when it would have destroyed morphological distinctions. An example of semantic influence is fear for homonyms. Most forms with de could presumably be explained in one way or another.¹²⁾ It seems to me that all traditional (ad hoc) "explanations" to exceptions are based on the assumption that some sort of 'pressure' has prevented a rule from applying.

We could take these arguments as an indication of the fact that Z has forgotten to write a couple of 'competing rules' e.g.:

- (24) (i) $\emptyset\emptyset \rightarrow de$ / VV- (certain morphological conditions)
 (ii) $\emptyset\emptyset \rightarrow de$ / VV- (certain semantic conditions)

Together with the rules already postulated by Z:

- (25) (iv) $de \rightarrow \emptyset\emptyset$ / VV- (certain phonetic conditions) (=19)
 (v) $\emptyset\emptyset \rightarrow de$ / VV- (certain stylistic conditions) (=21)

These four rules may be applied in 24 different orders. It is clear that we cannot seriously entertain the thought that Z's proposal should be extended to cover all the possible 'pressures' not to apply a rule and I regard this as an extra argument against the plausibility of describing different influences on a rule, which are indeed in some sense competing, as competing rules.¹³⁾ Z's proposal simply leads to absurd (though of course very deep) derivations when pushed to its logical consequences.

I conclude that the theory of competing rules is not the appropriate means to account for the 'competing forces' that influence the application or non-application of rules.

3. Conclusions

In the preceding paragraph I discussed two types of converted rules as they are used in Zonneveld (1978, ch. 4). For each type of converted rule Z adduced one new analysis to illustrate or prove his special view with regard to its motivation or behaviour. The first analysis appeared to be wrong, because the crucial facts must be explained in another way. Z could easily have found this out himself by checking into Schönfeld. The second analysis was simply badly chosen. However, instead of inviting Z to dig up more successful cases I have, in addition, presented some of the major arguments that vitiate any such attempt.

NOTES

1. This article is a (for the purpose of this volume condensed) reaction on the fourth chapter of Zonneveld (1978). I understand that a rewritten version of this chapter will appear in Zonneveld et al. (forthcoming). I thank Teun Hoekstra and Michael Moortgat for their valuable comments.
2. For rule symmetry see Saporta (1965) and especially Decamp (1972). For rule inversion Vennemann (1972, 1974).
3. References without further source apply to Zonneveld (1978).
4. A detailed formulation of this rule is given by Z on p. 217.
5. It might be suggested that there is a weaker relation between inversion and social attitude, in as far as a rule that is strongly disapproved of is not likely to be inverted.
6. Cf. Hogg (1978), Sanders (1978).
7. A more detailed version of this rule can be found on p. 112 in Z's book.
8. To explain the facts in (20) in terms of a threshold condition is clearly impossible as Z points out (p. 267).
9. I consider (23) to be a description of the diachronic 'derivations'. It should be clear, however, that these derivations have synchronic reflexes that presuppose the correctness of Anderson's (1974) local ordering theory.
10. Two independent rules that belong to the same style level standing in a feeding relationship are likely to become unproductive as was argued by Wang (1971).
11. The process of lexical diffusion in the reverse has been described in Janson (1977).

12. E.g. a neighbouring dialect, not having contraction, could have resulted in pressure not to apply the rule. This means, to be sure, that the traditional notion dialect borrowing can be integrated into the theory of competing rules, simply by taking the 'old situation' in a neighbouring dialect as a reverse change.
13. Van Coetsem et al. seem to regard competing influences as competing rules also.

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