

# The `phonrule` package (v1.1.0)

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## 1 Purpose

This package provides macros for typesetting phonological rules like those in *Sound Pattern of English* (Chomsky, Noam & Morris Halle. 1968. *The sound pattern of English*. New York, Evanston, and London: Harper & Row).

## 2 Usage

`\phon{<input>}{<output>}`

The command `\phon` has two arguments: the first one is the input of the rule and the second is its output. Here is an example with the code and the result it produces:

- (1) `\phon{z}{r}`
- (2)  $z \rightarrow r$

`\phonc{<input>}{<output>}{<context>}`

`\phonc` adds a third argument for the context:

- (3) `\phonc{a}{ə}{[-stressed]}`
- (4)  $a \rightarrow ə / [-stressed]$

The commands `\phonl`, `\phonr` and `\phonb` add a place holder line and put the context, respectively, on the left (l), on the right (r) and on both sides (b):

- (5) a. `\phonl{k}{c}{i}`  
b.  $k \rightarrow t / i\_$
- (6) a. `\phonr{t}{ts}{u}`  
b.  $t \rightarrow ts / \_u$
- (7) a. `\phonb{s}{z}{V}{V}`  
b.  $s \rightarrow z / V\_V$

The `\oneof` command provides the possibility to compile several contexts, one per line, embraced by a left curly bracket.

(8) `\phonc{t}{ts}{`  
`\oneof{`  
`\phold i \\  
\phold u}  
}`

(9)  $t \rightarrow ts / \begin{cases} \_i \\ \_u \end{cases}$

The `\phonfeat` command allows you to insert feature specifications:

(10) `\phonc{t}{ts}{\phold`  
`\phonfeat{`  
`-consonantal \\  
+high \\  
+front}  
}`

(11)  $t \rightarrow ts / \_ \left[ \begin{array}{l} \text{-consonantal} \\ \text{+high} \\ \text{+front} \end{array} \right]$

`\phold` typesets a place holder line. You can nest `oneof` and `phonfeat` commands for complex rules.

(12) `\phonc{x}{y}{\oneof{`  
`\phold z \\  
\phonfeat{  
+feature x \\  
-feature y  
} \phold  
}}`

(13)  $x \rightarrow y / \begin{cases} \_z \\ \left[ \begin{array}{l} \text{+feature x} \\ \text{-feature y} \end{array} \right] \_ \end{cases}$

You can use `\env`, `\envl`, `\envr`, `\envb` for rules with more than one output: these commands typeset only the different outputs with their respective environments.

(14) `\phon{x}{\oneof{`  
`\envr{w}{\mbox{z}} \\  
\envl{v}{\phonfeat{  
+feature x \\  
-feature y  
}}}}`

(15)  $x \rightarrow \begin{cases} w / \_z \\ v / \left[ \begin{array}{l} \text{+feature x} \\ \text{-feature y} \end{array} \right] \_ \end{cases}$

## 3 Changelog

### 3.1 v1.1.0

- Changed: definition of `\phonfeat` and `\oneof` with `\pbox` (requires package `pbox`)
- Fixed: documentation typos

### 3.2 v1.0.0

- Added: new commands `\env` for personalised outputs
- Changed: definition of commands with `\ensuremath`
- Changed: environments to commands
- Changed: place holder to 1.5ex length, -1.5pt vertical position
- Changed: curly brackets to only left in `\oneof` command