

The `phonrule` package (v1.0.0)

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1 Purpose

This packages 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 the output. Here is an example with code and result:

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

3 Usage

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

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

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

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 the left curly bracket. You need to use a `\mbox`.

(8) `\phonc{t}{ts}{`
`\oneof{`
`\phold \mbox{i} \\\`
`\phold \mbox{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{`
`\mbox{-consonantal} \\\`
`\mbox{+high} \\\`
`\mbox{+front}}`
`}`

(11) $t \rightarrow ts / - \begin{bmatrix} - \text{consonantal} \\ + \text{high} \\ + \text{front} \end{bmatrix}$

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

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

(13) $x \rightarrow y / \begin{cases} -z \\ \begin{bmatrix} + \text{feature x} \\ - \text{feature y} \end{bmatrix} - \end{cases}$

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

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

(15) $x \rightarrow \begin{cases} w / -z \\ v / \begin{bmatrix} + \text{feature x} \\ - \text{feature y} \end{bmatrix} - \end{cases}$

4 Changelog

4.1 v1.0.0

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