The `phonrule` package (v1.4.0)

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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 → r

```
\phonc⟨{⟩input⟨}{⟩output⟨}{⟩context}
```

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

(3)   `\phonc{a}{ə}{[-stressed]}`

(4)   a → 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 → t / i ___
(6)   a. `\phonr{t}{ts}{u}`
      b. t → ts / ___ u
(7)   a. `\phonb{s}{z}{V}{V}`
      b. s → 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}`
       `}`

$$(9) \quad \text{t} \rightarrow \text{ts} \ / \ \left\{ \begin{array}{l} \underline{}\,\text{i} \\ \underline{}\,\text{u} \end{array} \right.$$

The `\phonfeat` command allows you to insert feature specifications. The possible values are `[c]` for centre (the default), `[l]` for left-aligned, and `[r]` for right-aligned.

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

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

`\phold` typesets a place holder line. You can nest `oneof` and `phonfeat` commands for complex rules. The `oneof` command accepts an optional argument which tells the alignment of the context.

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

$$(13) \quad \text{x} \rightarrow \text{y} \ / \ \left\{ \begin{array}{l} \underline{}\,\text{z} \\ \left[\begin{array}{l} +\text{feature x} \\ -\text{feature y} \end{array} \right] \underline{} \end{array} \right.$$

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. The possible values are `[c]` for centre (the default), `[l]` for left-aligned, and `[r]` for right-aligned. The following example shows the use of the optional argument with `[l]`. The `\env`, `\envl`, `\envr`, `\envb` have a starred version to be used when an optional argument is set in `\oneof`.

(14) `\phon{x}{\oneof[l]{`
        `\envr*{w}{z} \\`
        `\envl*{v}{\phonfeat{`
          `+feature x \\-`

```
        feature y
}}}}
```

$$(15) \quad \text{x} \; \rightarrow \; \left\{ \begin{array}{l} \text{w} \; / \quad \overline{\quad} \text{z} \\[1em] \text{v} \; / \quad \begin{bmatrix} +\text{feature x} \\ -\text{feature y} \end{bmatrix} \overline{\quad} \end{array} \right.$$

3 Change log

v1.4.0 - 2017-11-05

Changed

- increased spacing around placeholder

- increased spacing around environment parenthesis

- increased size of slash

- thanks to Dr Scott Sadowsky (`http://sadowsky.cl/`) for implementing these changes

v1.3.2 - 2017-04-16

Added

- optional argument for text alignment in `\phonfeat` command

v1.3.1 - 2017-01-02

Added

- needs TeX format LaTeX2e

Removed

- `\makeatletter`

- unused definition

v1.3.0 - 2016-12-26

Added

- optional argument for text alignment in `\oneof` command

- starred version of the `\env` command family for use with optional argument in `\oneof`

Changed

- definition of `\phon` command family

- header of `phonrule.sty`

- extension of README, now `.md`

Removed

- package `ragged2e`

v1.2.0

Added

- `ragged2e` package for `\Centering` command

Fixed

- Fixed: now the content of the feature matrices is centred and not left aligned

v1.1.0

Changed

- definition of `\phonfeat` and `\oneof` with `\pbox` (requires package `pbox`)

   Fixed

- documentation typos

v1.0.0

Added

- new commands `\env` for personalised outputs

Changed

- definition of commands with `\ensuremath`
- environments to commands
- place holder to 1.5ex length, -1.5pt vertical position
- curly brackets to only left in `\oneof` command