

# Package ‘TeXCheckR’

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**Type** Package

**Title** Parses LaTeX Documents for Errors

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**URL** <https://github.com/HughParsonage/TeXCheckR>

**BugReports** <https://github.com/HughParsonage/TeXCheckR/issues>

**Description** Checks LaTeX documents and .bib files for typing errors, such as spelling errors, incorrect quotation marks. Also provides useful functions for parsing and linting bibliography files.

**License** GPL-2

**Depends** R (>= 3.3.0)

**Imports** clisymbols, crayon, data.table (>= 1.9.0), fastmatch, hunspell (>= 2.5), hutils (>= 0.8.0), magrittr, rstudioapi, stats, tools, zoo

**LazyData** TRUE

**ByteCompile** true

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**NeedsCompilation** no

**Author** Hugh Parsonage [aut, cre]

**Maintainer** Hugh Parsonage <[hugh.parsonage@gmail.com](mailto:hugh.parsonage@gmail.com)>

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## Contents

TeXCheckR-package . . . . .	3
any_bib_duplicates . . . . .	3
argument_parsing . . . . .	4

bib_parser . . . . .	5
braces_closes_at . . . . .	6
check_biber . . . . .	7
check_consecutive_words . . . . .	7
check_dashes . . . . .	8
check_escapes . . . . .	9
check_footnote_typography . . . . .	9
check_labels . . . . .	10
check_literal_citations . . . . .	11
check_literal_xrefs . . . . .	11
check_quote_marks . . . . .	12
check_spelling . . . . .	12
check_xrefs . . . . .	15
commands_used . . . . .	15
correctly_spelled_words . . . . .	16
CORRECTLY_SPELLLED_WORDS_CASE_SENSITIVE . . . . .	16
extract_LaTeX_argument . . . . .	17
extract_mandatory_LaTeX_argument . . . . .	17
extract_optional_LaTeX_argument . . . . .	18
extract_validate_abbreviations . . . . .	19
figs_tbls_unrefd . . . . .	19
inputs_of . . . . .	20
isR_line_in_knitr . . . . .	20
lint_bib . . . . .	21
locate_mandatory_LaTeX_argument . . . . .	21
minimal_bib . . . . .	22
parse_tex . . . . .	22
position_of_string . . . . .	23
read_tex_document . . . . .	24
report_error . . . . .	24
rm_editorial_square_brackets . . . . .	25
separate_sentences . . . . .	26
split_report . . . . .	26
strip_comments . . . . .	27
tex_group_by_char . . . . .	28
validate_bibliography . . . . .	28
valid_English_contractions . . . . .	29
veto_sic . . . . .	30
weld_bmillion . . . . .	30
wrongly_spelled_words . . . . .	31

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TeXCheckR-package	<i>TeXCheckR</i>
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### Description

Checks LaTeX documents and .bib files for typing errors, such as spelling errors, incorrect quotation marks. Also provides useful functions for parsing and linting bibliography files.

---

any_bib_duplicates	<i>Are any bib entries duplicated?</i>
--------------------	--

---

### Description

Are any bib entries duplicated?

### Usage

```
any_bib_duplicates(bib.files, .report_error, rstudio = FALSE)
```

### Arguments

bib.files	Files to check for duplicates
.report_error	How errors should be logged.
rstudio	Use the RStudio API?

### Details

This function is very fastidious about the format of bib.files. Run [lint\\_bib](#) (noting that this will overwrite your bibliography) if it complains.

This function finds exact duplicates in the author title date/year and volume fields. Note that it is not possible in general to detect actual duplicates; you will still need to inspect the printed bibliography.

### Value

Called for its side-effect. If duplicates are detected, the first six are printed as a `data.table`; otherwise, NULL, invisibly.

---

argument\_parsing      *Replace nth arguments*

---

### Description

Replace nth arguments

### Usage

```
replace_nth_LaTeX_argument(
  tex_lines,
  command_name,
  n = 1L,
  replacement = "correct",
  optional = FALSE,
  warn = TRUE,
  .dummy_replacement = "Qq"
)
```

```
nth_arg_positions(
  tex_lines,
  command_name,
  n = 1L,
  optional = FALSE,
  star = TRUE,
  data.tables = TRUE,
  allow_stringi = TRUE
)
```

### Arguments

<code>tex_lines</code>	A character vector of a LaTeX file (as read in from <code>readLines</code> or <code>readr::read_lines</code> ).
<code>command_name</code>	The command name, or the pattern of the command, without the initial backslash.
<code>n</code>	Which argument of the command.
<code>replacement</code>	What to replace the <code>nth</code> argument with.
<code>optional</code>	If <code>FALSE</code> , the default, the <code>nth</code> mandatory argument is extracted. If <code>TRUE</code> , the <code>nth optional</code> argument is extracted.
<code>warn</code>	If the <code>nth</code> argument is not present, emit a warning? Set to <code>FALSE</code> for n-ary commands.
<code>.dummy_replacement</code>	An intermediate replacement value. This value cannot be present in <code>tex_lines</code> .
<code>star</code>	Assume the starred version of the command. That is, assume that the contents of the argument lies on a single line.
<code>data.tables</code>	Should each element of the list be a <code>data.table</code> ? Set to <code>FALSE</code> for performance.
<code>allow_stringi</code>	(logical, default: <code>TRUE</code> ) If <code>FALSE</code> , non-stringi functions are allowed.

**Details**

`nth_arg_positions` reports the starts and stops of the command for every line. This includes the braces (in order to accommodate instances where the argument is empty).

If the line is empty or does not contain the command the values of `starts` and `stops` are `NA_integer_`.

**Examples**

```
nth_arg_positions("This is a \\textbf{strong} statement.", "textbf")
replace_nth_LaTeX_argument("This is a \\textbf{strong} statement.", "textbf")
```

---

 bib\_parser

*Functions for parsing .bib files*


---

**Description**

Functions for parsing .bib files

**Usage**

```
fread_bib(
  file.bib,
  check.dup.keys = TRUE,
  strip.braces = TRUE,
  check.unescaped.percent = TRUE,
  .bib_expected = TRUE,
  halt = TRUE,
  rstudio = FALSE,
  .report_error
)

bib2DT(file.bib, to_sort = FALSE)

reorder_bib(file.bib, outfile.bib = file.bib)
```

**Arguments**

`file.bib` .bib file.

`check.dup.keys` If TRUE, the default, return error if any bib keys are duplicates.

`strip.braces` If TRUE, the default, braces in fields are removed.

`check.unescaped.percent`  
If TRUE, the default, fields with unescaped percent signs are an error. (Unescaped percent signs in URLs are permitted.) Set to FALSE to skip this check.

`.bib_expected` (logical, default: TRUE) Should `file.bib` be expected to have file extension `.bib`? If expectation violated, a warning is emitted.

<code>halt</code>	Whether to halt on error. If NULL, the default, the value <code>getOption("TeXCheckR.halt_on_error")</code> is used. Otherwise, TRUE or FALSE to halt regardless of the value of the option.
<code>rstudio</code>	(logical, default: FALSE) If TRUE, pop the RStudio session to the location in <code>file.bib</code> of the first error.
<code>.report_error</code>	A function like <a href="#">report2console</a> to handle errors.
<code>to_sort</code>	Include only author, title, year, and date.
<code>outfile.bib</code>	File to write the reordered bib to. Defaults to <code>file.bib</code> .

### Details

`bib2DT` returns a `data.table` of the entries in `file.bib`. The function `reorder_bib` rewrites `file.bib`, to put it in surname, year, title, line number order.

---

<code>braces_closes_at</code>	<i>Brace closes at</i>
-------------------------------	------------------------

---

### Description

Where do braces close?

### Usage

```
braces_closes_at(tex_line, position_of_opening_brace)
```

### Arguments

<code>tex_line</code>	A single line.
<code>position_of_opening_brace</code>	An integer giving the position of the opening brace in question.

### Value

The positions of the closing brace matching the opening braces at `position_of_opening_brace`.

---

check_biber	<i>Check biber</i>
-------------	--------------------

---

**Description**

Check biber

**Usage**

```
check_biber(path = ".", rstudio = FALSE)
```

**Arguments**

path	The path containing the blg file, following successful compilation.
rstudio	Use the RStudio API?

---

check_consecutive_words	<i>Check consecutive typeset words</i>
-------------------------	--

---

**Description**

Check consecutive typeset words

**Usage**

```
check_consecutive_words(
  path = ".",
  latex_file = NULL,
  md5sum.ok = NULL,
  outfile = NULL,
  outfile.append = FALSE
)
```

**Arguments**

path	Path containing the LaTeX file.
latex_file	The LaTeX file (without path) whose output will be checked.
md5sum.ok	The output of md5sum of an acceptable LaTeX file. Since some repeated words will be spurious, you can use the md5sum of the output of this function.
outfile	A file to which the output can be saved. If NULL, the default, the output is printed to the console (and not saved).
outfile.append	(logical, default: FALSE). Append or overwrite outfile if specified? If FALSE, the default, and file exists, outfile will be overwritten.

**Value**

NULL if the LaTeX document does not create a PDF with lines repeated. An error if words are repeated on consecutive lines, together with `cat()` output of the offending lines. The output is presented in 'stanzas':

```
'<Repeated word>'
  <Context>
```

for example a document that results in the following lines, notably the repetition of *household*, the output would be:

```
'household'
  affordable. This `mortgage burden' is often defined as the proportion of
  household income spent on repaying a mortgage. Depending on the
  household income measure used, the mortgage burden on a newly
  purchased first home, assuming a person borrows 80 per cent of the
  value of the home, is currently lower than much of the period between
```

Lastly the error message contains the `md5sum` of the file is returned in the error message, so it can be supplied to `md5sum.ok`.

---

check\_dashes

*Check dashes entered as hyphens*

---

**Description**

Check dashes entered as hyphens

**Usage**

```
check_dashes(
  filename,
  .report_error,
  dash.consistency = c("en-dash", "em-dash"),
  protases_ok = TRUE,
  rstudio = TRUE
)
```

**Arguments**

<code>filename</code>	A tex or Rnw file.
<code>.report_error</code>	How errors should be reported.
<code>dash.consistency</code>	Character vector permitted dash types.
<code>protases_ok</code>	(logical, default: TRUE) Should em-dashes be permitted when they form a protasis in a list? <code>\item</code> when there is an emdash---always.
<code>rstudio</code>	(logical, default: TRUE) Use the RStudio API?

**Value**

File stops and `cat()`s on any line where a hyphen is surrounded by a space. Excludes dashes in knitr chunks and LaTeX math mode `\(...\)` but not in TeX math mode `$. . $`.

---

check_escapes	<i>Check escapes</i>
---------------	----------------------

---

**Description**

Checks file for unescaped dollar signs. With these present, there is a risk of constructions like We gave \$10 to a million people at a cost of \$10~million dollars., which is valid syntax, but incorrectly formatted. Accordingly, math-mode must be more assertively requested using `\(. . \)`.

**Usage**

```
check_escapes(filename, .report_error)
```

**Arguments**

filename	File in which to report the error
.report_error	How the errors should be reported.

**Value**

An error if unescaped dollar signs are present in filename. Otherwise, NULL invisibly.

---

check_footnote_typography	<i>Check footnote typography</i>
---------------------------	----------------------------------

---

**Description**

Check footnote typography

**Usage**

```
check_footnote_typography(
  filename,
  ignore.lines = NULL,
  .report_error,
  rstudio = FALSE
)
```

**Arguments**

filename        A LaTeX file.  
 ignore.lines   Lines to ignore (for example, those using the word 'footnote').  
 .report\_error   A function to provide context to any errors.  
 rstudio        (logical, default: FALSE) Should the RStudio API be used?

**Details**

See <https://github.com/grattan/grattex/blob/master/doc/grattexDocumentation.pdf> for full set of error conditions.

**Value**

Called for its side-effect.

**Examples**

```
## Not run:
tex_file <- tempfile(fileext = ".tex")
cat("Footnote not ending with full stop.\\footnote{No sentence}", file = tex_file)
check_footnote_typography(tex_file)

## End(Not run)
```

---

check\_labels

*Check labels*

---

**Description**

Check labels

**Usage**

```
check_labels(filename, .report_error, check.chaprefs = TRUE)
```

**Arguments**

filename        The LaTeX source file to check.  
 .report\_error   The function to provide context to the error.  
 check.chaprefs (logical, default: TRUE) If TRUE, require all cross-references to use \Chapref.

**Details**

Checks each label has a prefix and the prefix is one of the following: fig:, tbl:, box:, chap:, sec:, eq:, subsec:, subsubsec:, para: paragraph:. Checks also that chapter labels are marked with chap:. (N.B. although each label must have a prefix, it must not necessarily the *right* prefix; for example, a table caption may have prefix tbl:.)

**Value**

NULL, invisibly if labels check out. An error otherwise.

---

check\_literal\_citations

*Check that citations are all using cites*

---

**Description**

Check that citations are all using cites

**Usage**

```
check_literal_citations(filename, .report_error)
```

**Arguments**

filename	TeX document
.report_error	Function to report errors

---

check\_literal\_xrefs    *Check for hard-coded cross-references*

---

**Description**

Check for hard-coded cross-references

**Usage**

```
check_literal_xrefs(filename, .report_error)
```

**Arguments**

filename	The TeX file to check
.report_error	How errors should be reported.

**Value**

An error, or if none found, NULL invisibly.

---

check\_quote\_marks      *Check quote marks in TeX*

---

**Description**

Checks whether a closing quote has been used at the start of a word.

**Usage**

```
check_quote_marks(filename, .report_error, rstudio = FALSE)
```

**Arguments**

filename      LaTeX filename.  
.report\_error      A function determining how errors will be reported.  
rstudio      Use the rstudioapi package to jump to the location of the first error.

**Examples**

```
## Not run:  
tex_file <- tempfile(fileext = ".tex")  
cat("This is the wrong 'quote' mark.", file = tex_file)  
check_quote_marks(tex_file)  
file.remove(tex_file)  
  
## End(Not run)
```

---

check\_spelling      *Spell checking*

---

**Description**

Spell checking

**Usage**

```
check_spelling(  
  filename,  
  tex_root = dirname(filename),  
  pre_release = TRUE,  
  ignore.lines = NULL,  
  known.correct = NULL,  
  known.correct.fixed = NULL,  
  known.wrong = NULL,  
  ignore_spelling_in = NULL,
```

```

    ignore_spelling_in_nth = NULL,
    bib_files,
    check_etcs = TRUE,
    dict_lang = "en_GB",
    rstudio = FALSE,
    .report_error
)

```

## Arguments

filename	Path to a LaTeX file to check.
tex_root	The root path of the filename. Provide this if you are checking an <code>\input</code> file that has a different root directory to its parent.
pre_release	Should the document be assumed to be final? Setting to <code>FALSE</code> permits the use of <code>ignore_spelling_in</code> and permits <code>add_to_dictionary</code> to be present outside the document preamble.
ignore.lines	Integer vector of lines to ignore (due to possibly spurious errors).
known.correct	Character vector of patterns known to be correct (which will never be raised by this function).
known.correct.fixed	Character vector of words known to be correct (which will never be raised by this function).
known.wrong	Character vector of patterns known to be wrong.
ignore_spelling_in	Command whose first mandatory argument will be ignored.
ignore_spelling_in_nth	Named list of arguments to ignore; names are the commands to be ignored, values are the <code>nth</code> argument to be ignored.
bib_files	Bibliography files (containing possible clues to misspellings). If supplied, and this function would otherwise throw an error, the <code>.bib</code> files are read and any author names that match the misspelled words are added to the dictionary.
check_etcs	If <code>TRUE</code> , stop if any variations of <code>etc</code> , <code>ie</code> , and <code>eg</code> are present. (If they are typed literally, they may be formatted inconsistently. Using a macro ensures they appear consistently.)
dict_lang	Passed to <code>hunspell::dictionary</code> .
rstudio	Use the RStudio API?
.report_error	A function to provide context to any errors. If missing, defaults to <a href="#">report2console</a> .

## Details

Extends and enhances `hunspell`:

- You can add directives in the document itself. To add a word `foobaz` to the dictionary (so its presence does not throw an error), write `% add_to_dictionary: foobaz` on a single line. The advantage of this method is that you can collaborate on the document without having to keep track of which spelling errors are genuine.

- The directive `% ignore_spelling_in: mycmd` which will ignore the spelling of words within the first argument of `\mycmd`.
- `ignore_spelling_in_file: <file.tex>` will skip the check of `<file.tex>` if it is input or include in filename, as well as any files within it. Should appear as it is within input but with the file extension
- Only the root document need be supplied; any files that are fed via `\input` or `\include` are checked (recursively).
- A historical advantage was that the contents of certain commands were not checked, the spelling of which need not be checked as they are not printed, viz. citation and cross-reference commands, and certain optional arguments. Most of these are now parsed correctly by `hunspell`, though some still need to be supplied (including, naturally, user-supplied macros).
- Abbreviations and initialisms which are validly introduced will not throw errors. See [extract\\_valid\\_abbreviations](#).
- Words preceded by '[sic]' will not throw errors.

The package comes with a suite of [correctly\\_spelled\\_words](#) that were not present in `hunspell`'s dictionary.

This function should be quite fast, but slower than `hunspell::hunspell` (which it invokes). I aim for less than 500 ms on a real-world report of around 100 pages. The function is slower when it needs to consult `bib_files`, though I recommend adding authors, titles, etc. to the dictionary explicitly, or using `citeauthor` and `friends`.

This function is forked from <https://github.com/hughparsonage/grattanReporter> to parse reports of the Grattan Institute, Melbourne for errors. See <https://github.com/grattan/grattex/blob/master/doc/grattexDocumentation.pdf> for the full spec. Some checks that package performs have been omitted in this package.

## Value

Called primarily for its side-effect. If the spell check fails, the line at which the first error was detected, with an error message. If the check succeeds, NULL invisibly.

## Examples

```
## Not run:
url_bib <-
paste0("https://raw.githubusercontent.com/HughParsonage/",
       "grattex/e6cab97145d38890e44e83d122e995e3b8936fc6/",
       "Report.tex")
check_spelling(url_bib)

## End(Not run)
```

---

check_xrefs	<i>Check cross-references</i>
-------------	-------------------------------

---

**Description**

Check cross-references that are repetitive or (in the case of `cleveref` and `varioref`) incorrect case.

**Usage**

```
check_xrefs(filename, permitted.case = c(NA, "upper", "lower"), .report_error)
```

**Arguments**

filename	A LaTeX file
permitted.case	One of NA, "upper", "lower". If NA, the default, both <code>\Cref</code> and <code>\cref</code> are permitted, but not in the same document. If upper, only <code>\Cref</code> is permitted; if lower, only <code>\cref</code> . If NULL, the case is not checked at all.
.report_error	The function to provide context to the error.

---

commands_used	<i>List all unique commands in a document</i>
---------------	---

---

**Description**

List all unique commands in a document

**Usage**

```
commands_used(tex_lines)
```

**Arguments**

tex_lines	A LaTeX document as read from <code>readr::read_lines</code> or <code>readLines</code> .
-----------	--

**Value**

A character vector of unique commands used in `tex_lines`.

**Examples**

```
commands_used(c("A \\abc{d}", "\\def{x}"))
```

correctly\_spelled\_words

*List of correctly spelled words*

---

**Description**

List of correctly spelled words

**Usage**

correctly\_spelled\_words

**Format**

A character vector of words as perl-regex patterns to skip during the spell check.

---

CORRECTLY\_SPELLLED\_WORDS\_CASE\_SENSITIVE

*List of correctly spelled, case-sensitive words*

---

**Description**

List of correctly spelled, case-sensitive words

**Usage**

CORRECTLY\_SPELLLED\_WORDS\_CASE\_SENSITIVE

**Format**

A character vector of words as perl-regex case-sensitive patterns to skip during the spell check.

---

`extract_LaTeX_argument`*Extract LaTeX command argument*

---

**Description**

This is a simple wrapper around `extract_mandatory_LaTeX_argument` and `extract_optional_LaTeX_argument`.

**Usage**

```
extract_LaTeX_argument(tex_lines, command_name, n = 1L, optional = FALSE)
```

**Arguments**

<code>tex_lines</code>	LaTeX text.
<code>command_name</code>	Name of command without backslash <code>\textbf</code> corresponds to <code>command_name = "textbf"</code> .
<code>n</code>	Which argument to extract, if exists.
<code>optional</code>	Extract the optional argument, rather than the mandatory arguments.

---

`extract_mandatory_LaTeX_argument`*Extract mandatory argument II*

---

**Description**

Extract mandatory argument II

**Usage**

```
extract_mandatory_LaTeX_argument(  
  tex_lines,  
  command_name,  
  n = 1L,  
  by.line = FALSE,  
  parsed_doc = NULL  
)
```

**Arguments**

<code>tex_lines</code>	A character vector of lines as read from a LaTeX document.
<code>command_name</code>	The command name (no backslash or opening brace).
<code>n</code>	Which integer to
<code>by.line</code>	If FALSE, the default, each row of the <code>data.table</code> returned has the entire contents of the argument in <code>extract</code> column. If TRUE, the contents is split as it is in the document; arguments over multiple lines in the document are split over multiple rows in the <code>data.table</code> returned.
<code>parsed_doc</code>	A parsed document (from <code>parse_tex</code> ). <code>parse_tex</code> . Use this argument if the cost of running <code>parse_tex</code> is expensive (such as repeatedly over the same document).

---

`extract_optional_LaTeX_argument`  
*Extract optional argument*

---

**Description**

Extract optional argument

**Usage**

```
extract_optional_LaTeX_argument(  
  tex_lines,  
  command_name,  
  n = 1L,  
  by.line = FALSE  
)
```

**Arguments**

<code>tex_lines</code>	A character vector reading from a LaTeX document.
<code>command_name</code>	Name of command (without backslash)
<code>n</code>	Which optional argument to extract.
<code>by.line</code>	Should the output be one row per command (FALSE, the default), with extracts concatenated via <code>paste0(..., collapse = "")</code> or one row per line per command?

---

 extract\_validate\_abbreviations

*Extract valid abbreviations and initialisms*


---

### Description

Extracts abbreviations which are preceded by the full text (*e.g.* 'The Quebec Xylophone Enterprise Foundation (QXEF)').

### Usage

```
extract_validate_abbreviations(lines)
```

### Arguments

lines	Lines to extract
-------	------------------

### Details

Only 'valid' abbreviations are extracted, viz. those abbreviations of the form (ABC) where the first letters of the preceding words (excluding some common words like of, and, etc.) are 'a', 'b', 'c'.

### Value

Character vector of abbreviations of the form (ABC)

---

 figs\_tbls\_unrefd

*Return unreferenced figures or tables in document*


---

### Description

Useful for checking whether all the figures and tables in a document have been referenced in the main text. You may exclude figures and tables from the check by using the directive `% may_be_left_unreferenced:` in the preamble before the label that is to be excluded.

### Usage

```
figs_tbls_unrefd(filename, .report_error, check.labels = TRUE)
```

### Arguments

filename	A LaTeX file.
.report_error	A function to provide context to any errors.
check.labels	if TRUE, the default, run <a href="#">check_labels</a> on filename to ensure the figure and table labels in filename are in the expected form or style. Set to FALSE for possibly faster runs but the risk of spurious results.

**Value**

The labels of any figure or table left unreferenced in filename (including inputs).

---

inputs_of	<i>Inputs to files nested within LaTeX document</i>
-----------	---

---

**Description**

Inputs to files nested within LaTeX document

**Usage**

```
inputs_of(filename, exclude.preamble = TRUE, append.tex = TRUE)
```

**Arguments**

filename	The file whose \inputs are to be extracted.
exclude.preamble	(logical) If TRUE, the default, only \inputs and \includes within the document environment are returned.
append.tex	Should the result include the file extension .tex? By default, TRUE. Setting to FALSE may be useful when the file is not a .tex file.

**Value**

A character vector of file paths relative to filename that are used as \inputs or \includes within filename. If no such files are present within filename, NULL is returned.

---

isR_line_in_knitr	<i>Is a line in knitr R or not?</i>
-------------------	-------------------------------------

---

**Description**

Is a line in knitr R or not?

**Usage**

```
isR_line_in_knitr(lines)
```

**Arguments**

lines	Lines to check, as in the result of readLines. Not a filename.
-------	--

**Value**

TRUE if in knitr chunk (including boundaries). FALSE otherwise.

---

lint_bib	<i>Tidy bibliography so equals signs align</i>
----------	--

---

**Description**

Tidy bibliography so equals signs align

**Usage**

```
lint_bib(bib_file, outfile = bib_file, leading_spaces = 2L)
```

**Arguments**

bib_file	The bib file to tidy.
outfile	Optionally, the tidied bib file to write to.
leading_spaces	The number of spaces before each field within an entry.

**Details**

Aligns the equals signs in bib\_file and ensures all fields have a trailing comma.

---

locate_mandatory_LaTeX_argument	<i>Locate contents of LaTeX commands</i>
---------------------------------	--

---

**Description**

Provides the locations of LaTeX commands with mandatory arguments.

**Usage**

```
locate_mandatory_LaTeX_argument(
  tex_lines,
  command_name,
  n = 1L,
  parsed_doc = NULL
)
```

**Arguments**

tex_lines	A character vector of a LaTeX document, – for example as obtained from readLines("mydoc.tex").
command_name	The command (without backslash) whose arguments' locations are desired.
n	Integer vector: which argument(s) to locate. If n = NA, the n-th argument positions <i>for all n</i> .
parsed_doc	The result of parse_tex(tex_lines).

---

minimal_bib	<i>Generate a minimal bibliography file</i>
-------------	---

---

**Description**

Generate a minimal bibliography file

**Usage**

```
minimal_bib(path = ".", bbl.file = NULL, bib.files = NULL, out.bib = bib.files)
```

**Arguments**

path	A directory containing a document after it has been run with pdf <sub>l</sub> atex.
bbl.file	A .bbl file.
bib.files	The .bib file or files that were used by BibLaTeX to produce the bibliography. If NULL, the default, the files are inferred from the contents of <code>\addbibresource</code> within the (unique) .tex file are used.
out.bib	The new file of bibliography.

---

parse_tex	<i>Parse LaTeX lines</i>
-----------	--------------------------

---

**Description**

Parse LaTeX lines

**Usage**

```
parse_tex(tex_lines)
```

**Arguments**

tex_lines	Character vector (as read from a .tex file).
-----------	--

**Value**

A data.table where each row identifies a unique character in tex\_lines.

line\_no Matches the index of tex\_lines.

char\_no The character within line\_no.

char The character. A single character.

tex\_group The TeX group by default. Any delimiters can be used.

optional\_tex\_group (If any present), the optional TeX group.

`tgi` The number of braces opened at the *i*-th current TeX group level.

`GROUP_IDi` An integer identifying the unique contiguous block at the TeX group at or above the current group level.

`GROUP_IDi` The analog for optional groups.

If `tex_lines` is zero-length, a null data. table.

### Examples

```
parse_tex(c("A{", "B[a]{b{c}{d}}z")
# The version transposed:
#
#>      char : A{}B[a]{b{c}{d}}z
#>      tg1  : 011111122.....22
#>      tg2  : 00000000011122222
#>      og1  : 00001111111111111
#>      GROUP_ID1 : .11....222222222.
#>      GROUP_ID2 : .....111222..
#>      OPT_GROUP_ID1 : ....111.....
```

---

position\_of\_string      *Position of strings*

---

### Description

Position of strings

### Usage

```
position_of_string(tex_line_split, command_split, end = TRUE)
```

```
positions_of_all_strings(tex_line, command_name, end = TRUE)
```

### Arguments

`tex_line_split` A split line (via `strsplit(x, split = "")`).

`command_split` The string the position of which is desired, split (via `strsplit(x, split = "")`).

`end` (logical) Should the position of the **end** of the string. By default, TRUE; otherwise, the start of the string is chosen.

`tex_line` A line of text.

`command_name` The string the position of which is desired.

### Value

The end (or start if `end = FALSE`) of the location of command

---

read\_tex\_document      *Read a LaTeX document*

---

**Description**

Read a LaTeX document

**Usage**

```
read_tex_document(file_root)
```

**Arguments**

file\_root      The root of the TeX file.

---

report\_error      *Report errors to console*

---

**Description**

Report errors to console

**Usage**

```
report2console(  
  file = NULL,  
  line_no = NULL,  
  column = NULL,  
  context = NULL,  
  error_message = NULL,  
  advice = NULL,  
  build_status = NULL,  
  extra_cat_ante = NULL,  
  extra_cat_post = NULL,  
  caret = FALSE,  
  rstudio = FALSE,  
  log_file = NULL,  
  log_file_sep = "|",  
  silent = FALSE,  
  halt = getOption("TeXCheckR.halt_on_error", FALSE),  
  as_tbl = getOption("TeXCheckR.error_as_tbl", FALSE)  
)
```

**Arguments**

file	The file in which the error occurred.
line_no	The line number locating the source of the error.
column	The position on the line to identify the error (usually following the error).
context	The content of the file, to provide context to the error.
error_message	The error message to display beyond the console.
advice	Advice to the user: how should the detected error be resolved in general?
build_status	What should the build status be reported as?
extra_cat_ante	Character vector extra messages (placed before context).
extra_cat_post	Character vector extra messages (placed after context).
caret	(logical, default: FALSE) Should a caret symbol be placed beneath the context to point to the location of the error? The caret will be inserted on a new line after error_message and extra_cat_post. Length-one integer values of caret are permitted and will be interpreted as the number of caret symbols to be inserted at the position.
rstudio	If available, should the report be allowed to modify the RStudio session (for example, to pop to the location of the error)?
log_file	Optionally, path to a log file on which error_message will be written.
log_file_sep	How should the log file's fields be separated? By default, with a pipe (as tabs are common within error messages).
silent	(logical, default: FALSE) Suppress all output.
halt	Should failures halt via stop or just display a message in the console?
as_tbl	Return a list. Experimental.

---

 rm\_editorial\_square\_brackets

*Remove editorial square brackets*

---

**Description**

Change text such as phas[e] out to phase out, without removing square brackets denoting optional arguments.

**Usage**

```
rm_editorial_square_brackets(tex_lines)
```

**Arguments**

tex_lines	Lines (as from readLines).
-----------	----------------------------

**Examples**

```
x <- "the BCA's call to `urgently phas[e] out all side deals'"
rm_editorial_square_brackets(x)
```

---

separate\_sentences      *Put sentences on their own line*

---

**Description**

Put sentences on their own line

**Usage**

```
separate_sentences(filename, hanging_footnotes = FALSE)
```

**Arguments**

filename            A tex or knitr file in which to separate sentences.  
hanging\_footnotes  
                    (logical, default: FALSE) Should footnotes be indented?

**Value**

NULL. The function is called for its side-effect: rewriting filename with separated sentences.

---

split\_report            *Split report into include-able files*

---

**Description**

Split report into include-able files

**Usage**

```
split_report(  
  Report.tex,  
  include = TRUE,  
  subdir = "tex",  
  use.chapter.title = TRUE,  
  out.tex = Report.tex  
)
```

**Arguments**

Report.tex	File to split.
include	Should \include or \input be used? If TRUE, the default, \include is used.
subdir	What directory should each chapter file be written in? By default, a subdirectory of the folder containing Report.tex, called tex, is used.
use.chapter.title	Should the chapter title be used to name the chapter files? If TRUE, the default, the title is used (with characters outside [a-zA-Z0-9] replaced by spaces), prefixed by the chapter number; otherwise, just the chapter number is used.
out.tex	The new root file. By default, same as Report.tex.

---

strip_comments	<i>Strip comments from LaTeX lines</i>
----------------	--

---

**Description**

Strip comments from LaTeX lines

**Usage**

```
strip_comments(lines, retain.percent.symbol = TRUE)
```

**Arguments**

lines	Character vector of a LaTeX document.
retain.percent.symbol	(logical, default: TRUE) Should the % symbol itself be stripped?

**Value**

lines but with all text to the right of every unescaped % removed

**Examples**

```
some_lines <- c("Text. % A comment", "20\\% of comments are % useful")
strip_comments(some_lines)
strip_comments(some_lines, retain.percent.symbol = FALSE)
```

---

tex\_group\_by\_char      *TeX group by character position*

---

### Description

Opening a brace increases the 'group' in TeX. For example, in `a{bc}{d{e}}` a is in group 0, bc in group 1 as is d and e is in group 2.

### Usage

```
tex_group_by_char(tex_lines, optional = FALSE)
```

### Arguments

`tex_lines`      Character vector of a document LaTeX.  
`optional`      If FALSE (the default), the groups are taken with respect to braces. If TRUE, square brackets are used (perhaps not associated with a command).

### Value

A list the same length as `lines`. Each element an integer vector indicating the TeX group at that position.

For positions **at** braces the **upcoming** group is returned. So `a{b}` should return `0 1 1 0` (in its first element).

### Examples

```
tex_group_by_char("a{bc}{d{e}}")
```

---

validate\_bibliography      *Validate bibliography according to Grattan style*

---

### Description

Validate bibliography according to Grattan style

### Usage

```
validate_bibliography(path = ".", file = NULL, .report_error, rstudio = FALSE)
```

### Arguments

`path`              Containing the bib file.  
`file`              The bib file if specified.  
`.report_error`    How errors should be reported.  
`rstudio`          Use the RStudio API to jump to errors.

**Details**

This is a highly fastidious test of the bibliography. Useful for collaboration to ensure consistent style.

**Value**

NULL if bibliography validated.

**Examples**

```
## Not run:
bib_temp <- tempfile(fileext = ".bib")
url_bib <-
  paste0("https://raw.githubusercontent.com/HughParsonage/",
         "grattex/e6cab97145d38890e44e83d122e995e3b8936fc6",
         "/bib/Grattan-Master-Bibliography.bib")

download.file(url_bib, destfile = bib_temp)
validate_bibliography(file = bib_temp)

bib_temp <- tempfile(fileext = ".bib")
url_bib <-
  paste0("https://raw.githubusercontent.com/HughParsonage/",
         "grattex/8f7f52a28789d12a363ceb30cea3b41f590ae58a",
         "/bib/Grattan-Master-Bibliography.bib")
download.file(url_bib, destfile = bib_temp)
validate_bibliography(file = bib_temp)

## End(Not run)
```

---

valid\_English\_contractions

*Valid English contractions*

---

**Description**

List of words which should never raise a spelling error.

**Usage**

```
valid_English_contractions
```

**Format**

An object of class character of length 110.

**Source**

<https://gist.githubusercontent.com/J3RN/ed7b420a6ea1d5bd6d06/raw/acda66b325a2b4d7282fb602a7551912cd/contractions.txt>

---

veto_sic	<i>Veto sic</i>
----------	-----------------

---

**Description**

Vetoes words in a LaTeX document that are marked '[sic]' for the purpose of spell checking by replacing them (and '[sic]' itself) with white space of equal length.

**Usage**

```
veto_sic(tex_lines, quote = TRUE, sentence = !quote, words_ante = 1L)
```

**Arguments**

tex_lines	A character vector.
quote	(logical, default: TRUE) Veto words after the previous opening quote ( <i>i.e.</i> back-tick) symbol.
sentence	(logical, default: TRUE) Veto words before [sic] in the same sentence. (The start of a sentence is taken to be the location of the capital letter which is preceded by white space and a full stop.)
words_ante	The number of words to exclude. Ignored if quote or sentence is TRUE.

---

weld_bmillion	<i>Unbreaking spaces between billion and million</i>
---------------	--

---

**Description**

Unbreaking spaces between billion and million

**Usage**

```
weld_bmillion(filename, outfile = filename)
```

**Arguments**

filename	A LaTeX or knitr file.
outfile	The file to write to, defaults to filename.

**Value**

NULL. This function is called for its side-effect: rewriting filename with 30 million changed to 30~million.

---

wrongly\_spelled\_words *List of wrongly spelled words*

---

**Description**

List of wrongly spelled words

**Usage**

wrongly\_spelled\_words

**Format**

A regex of patterns to raise as spelling errors.

# Index

- \* **datasets**
  - correctly\_spelled\_words, 16
  - CORRECTLY\_SPELLLED\_WORDS\_CASE\_SENSITIVE, 16
  - valid\_English\_contractions, 29
  - wrongly\_spelled\_words, 31
- any\_bib\_duplicates, 3
- argument\_parsing, 4
- bib2DT (bib\_parser), 5
- bib\_parser, 5
- braces\_closes\_at, 6
- check\_biber, 7
- check\_consecutive\_words, 7
- check\_dashes, 8
- check\_escapes, 9
- check\_footnote\_typography, 9
- check\_labels, 10, 19
- check\_literal\_citations, 11
- check\_literal\_xrefs, 11
- check\_quote\_marks, 12
- check\_spelling, 12
- check\_xrefs, 15
- commands\_used, 15
- correctly\_spelled\_words, 14, 16
- CORRECTLY\_SPELLLED\_WORDS\_CASE\_SENSITIVE, 16
- extract\_LaTeX\_argument, 17
- extract\_mandatory\_LaTeX\_argument, 17, 17
- extract\_optional\_LaTeX\_argument, 17, 18
- extract\_valid\_abbreviations, 14
- extract\_valid\_abbreviations (extract\_validate\_abbreviations), 19
- extract\_validate\_abbreviations, 19
- figs\_tbls\_unrefd, 19
- fread\_bib (bib\_parser), 5
- hunspell, 14
- inputs\_of, 20
- isR\_line\_in\_knitr, 20
- lint\_bib, 3, 21
- locate\_mandatory\_LaTeX\_argument, 21
- md5sum, 8
- minimal\_bib, 22
- nth\_arg\_positions (argument\_parsing), 4
- parse\_tex, 18, 22
- position\_of\_string, 23
- positions\_of\_all\_strings (position\_of\_string), 23
- read\_tex\_document, 24
- reorder\_bib (bib\_parser), 5
- replace\_nth\_LaTeX\_argument (argument\_parsing), 4
- report2console, 6, 13
- report2console (report\_error), 24
- report\_error, 24
- rm\_editorial\_square\_brackets, 25
- separate\_sentences, 26
- split\_report, 26
- strip\_comments, 27
- tex\_group\_by\_char, 28
- TeXCheckR-package, 3
- valid\_English\_contractions, 29
- validate\_bibliography, 28
- veto\_sic, 30
- weld\_bmillion, 30
- wrongly\_spelled\_words, 31