

# Package ‘unstruwwel’

July 22, 2025

**Title** Detect and Parse Historic Dates

**Version** 0.2.2

**Maintainer** Stefanie Schneider <stefanie.schneider@itg.uni-muenchen.de>

## Description

Automatically converts language-specific verbal information, e.g., ``1st half of the 19th century," to its standardized numerical counterparts, e.g., ``1801-01-01/1850-12-31." It follows the recommendations of the 'MIDAS' ('Marburger Informations-, Dokumentations- und Administrations-System'), see <doi:10.11588/artdok.00003770>.

**License** GPL-3

**Encoding** UTF-8

**LazyData** true

**RoxygenNote** 7.3.2

**URL** <https://github.com/stefanieschneider/unstruwwel>

**BugReports** <https://github.com/stefanieschneider/unstruwwel/issues>

**Suggests** testthat, roxygen2

**Imports** R6, assertthat, lubridate, magrittr, stringr, tibble, tidyr,  
purrr, dplyr, rlang

**Depends** R (>= 2.10)

**NeedsCompilation** no

**Author** Stefanie Schneider [cre, aut] (ORCID:  
<<https://orcid.org/0000-0003-4915-6949>>)

**Repository** CRAN

**Date/Publication** 2025-01-27 09:00:02 UTC

## Contents

|           |   |
|-----------|---|
| Century   | 2 |
| Decade    | 3 |
| languages | 4 |
| midas     | 4 |

|                      |   |
|----------------------|---|
| Periods . . . . .    | 5 |
| schemes . . . . .    | 6 |
| unstruwwel . . . . . | 7 |
| Year . . . . .       | 8 |

|              |           |
|--------------|-----------|
| <b>Index</b> | <b>10</b> |
|--------------|-----------|

---

|         |                                                |
|---------|------------------------------------------------|
| Century | <i>Set a Century and Get its Time Interval</i> |
|---------|------------------------------------------------|

---

## Description

Set a Century and Get its Time Interval

Set a Century and Get its Time Interval

## Details

An Object of R6Class with methods to set common time periods and specifications for centuries.

## Super class

`unstruwwel::Periods` -> Century

## Methods

### Public methods:

- `Century$new()`
- `Century$clone()`

**Method** `new()`: Helper function to specify the beginning of a century.

Helper function to specify the middle of a century.

Helper function to specify the end of a century.

Create a century.

*Usage:*

`Century$new(value)`

*Arguments:*

value A numerical scalar.

*Returns:* Object of R6Class with methods to set common time periods and specifications for centuries.

**Method** `clone()`: The objects of this class are cloneable with this method.

*Usage:*

`Century$clone(deep = FALSE)`

*Arguments:*

deep Whether to make a deep clone.

**Examples**

```
if (interactive()) {
  x <- Century$new(15)
  x$take(2, type = "third")
}
```

Decade

*Set a Decade and Get its Time Interval***Description**

Set a Decade and Get its Time Interval

Set a Decade and Get its Time Interval

**Details**

An Object of R6Class with methods to set common time periods and specifications for decades.

**Super class**

`unstruwwel::Periods` -> Decade

**Methods****Public methods:**

- `Decade$new()`
- `Decade$clone()`

**Method** `new()`: Helper function to specify the beginning of a decade.

Helper function to specify the middle of a decade.

Helper function to specify the end of a decade.

Create a decade.

*Usage:*

`Decade$new(value, official_def = FALSE)`

*Arguments:*

`value` A numerical scalar.

`official_def` If 'TRUE', the official definition that begins with the year 1 is used.

*Returns:* Object of R6Class with methods to set common time periods and specifications for decades.

**Method** `clone()`: The objects of this class are cloneable with this method.

*Usage:*

`Decade$clone(deep = FALSE)`

*Arguments:*

`deep` Whether to make a deep clone.

Examples

```
if (interactive()) {  
  x <- Decade$new(1520)  
  x$take(1, type = "half")  
}
```

---

|           |                             |
|-----------|-----------------------------|
| languages | <i>Language Information</i> |
|-----------|-----------------------------|

---

Description

A dataset containing the names, date orders, stop words, simplifications, and replacements of 4 languages.

Usage

```
data(languages)
```

Format

A tibble with 4 rows and 5 variables.

---

|       |                                       |
|-------|---------------------------------------|
| midas | <i>MIDAS Standardization Examples</i> |
|-------|---------------------------------------|

---

Description

A dataset containing eight thousand standardization examples of the MIDAS (Marburger Informations-, Dokumentations- und Administrations-System).

Usage

```
data(midas)
```

Format

A vector of length 8115.

## Periods

*Set a Period and Get its Time Interval***Description**

Set a Period and Get its Time Interval

Set a Period and Get its Time Interval

**Details**

An Object of R6Class with methods to set common time periods and specifications for time periods.

**Public fields**

`.interval` Stores a time interval.

`fuzzy` Either '-1' (approximate) or '1' (uncertain).

`express` Either '-1' (before) or '1' (after).

**Active bindings**

`.interval` Stores a time interval.

`interval` Convert and return a POSIXt time interval.

`time_span` Convert and return a time span in years.

`iso_format` Convert and return a date in ISO 8601.

**Methods****Public methods:**

- [Periods\\$new\(\)](#)
- [Periods\\$set\\_additions\(\)](#)
- [Periods\\$take\(\)](#)
- [Periods\\$clone\(\)](#)

**Method** `new()`: Helper function to specify a time period.

Create a time period.

*Usage:*

`Periods$new(...)`

*Arguments:*

`...` Intervals, numerical scalars, or objects of class `Period`.

`x` A numerical scalar. The range of valid values depends on type. If type is "early", "mid", or "late", `x` is ignored.

`type` A character scalar. The following values are supported: "early", "mid", "late", "quarter", "third", and "half". If type is 'NULL', `x` defines a year or decade.

**Method** `set_additions()`: Set additions for a time period.

*Usage:*

```
Periods$set_additions(x)
```

*Arguments:*

x A character vector.

**Method** `take()`: Specify a period.

*Usage:*

```
Periods$take(x = NA, type = NA, ignore_errors = FALSE)
```

*Arguments:*

x A numerical scalar. The range of valid values depends on type. If type is "early", "mid", or "late", x is ignored.

type A character scalar. The following values are supported: "early", "mid", "late", "quarter", "third", and "half". If type is 'NULL', x defines a year or decade.

ignore\_errors If 'TRUE', error messages are ignored.

*Returns:* Object of R6Class with methods to set common time periods and specifications for time periods.

**Method** `clone()`: The objects of this class are cloneable with this method.

*Usage:*

```
Periods$clone(deep = FALSE)
```

*Arguments:*

deep Whether to make a deep clone.

---

schemes

*Language-Specific Scheme Variants*

---

## Description

A dataset containing the values, schemes, and languages for over three thousand language-specific scheme variants.

## Usage

```
data(schemes)
```

## Format

A tibble with 3583 rows and 3 variables.

**Description**

Detect and Parse Historic Dates, e.g., to ISO 8601:2-2019.

**Usage**

```
unstruwwel(  
  x,  
  language = NULL,  
  verbose = TRUE,  
  scheme = "time-span",  
  fuzzify = c(0, 0)  
)
```

**Arguments**

|          |                                                                                                                                                |
|----------|------------------------------------------------------------------------------------------------------------------------------------------------|
| x        | Input vector. Either a character vector, or something coercible to one.                                                                        |
| language | Language code of the input vector as defined in ISO 639-1. If NULL, language is detected automatically.                                        |
| verbose  | If TRUE, additional diagnostics are printed.                                                                                                   |
| scheme   | Scheme code of the output list. Either time-span, iso-format, or object.                                                                       |
| fuzzify  | A numerical vector of length 2 to extend the interval of approximate or uncertain time periods. This is only applied if scheme == "time-span". |

**Value**

A named list of vectors or objects of R6Class.

**Note**

Although multiple languages can be detected, only dominant ones are ultimately set.

**Examples**

```
if (interactive()) {  
  unstruwwel("1. Hälfte 19. Jahrhundert", language = "de")  
  unstruwwel("circa between 1901 and 1905", language = "en")  
}
```

---

Year

---

*Set a Year and Get its Time Interval*


---

### Description

Set a Year and Get its Time Interval

Set a Year and Get its Time Interval

### Details

An Object of R6Class with methods to set common time periods and specifications for years.

### Super class

`unstruwwel::Periods` -> Year

### Methods

#### Public methods:

- `Year$new()`
- `Year$take()`
- `Year$clone()`

**Method** `new()`: Helper function to specify a time period.

Helper function to specify a season.

Helper function to specify a month.

Create a year.

*Usage:*

`Year$new(value)`

*Arguments:*

value A numerical scalar.

*Returns:* Object of R6Class with methods to set common time periods and specifications for years.

**Method** `take()`: Specify a year.

*Usage:*

`Year$take(x = NA, type = NA, ignore_errors = FALSE)`

*Arguments:*

x A numerical scalar. The range of valid values depends on type. If type is "spring", "summer", "autumn", or "winter", x is ignored.

type A character scalar. The following values are supported: "spring", "summer", "autumn", "winter", and all English-language months.

ignore\_errors If 'TRUE', error messages are ignored.

*Returns:* Object of R6Class with methods to set common time periods and specifications for years.

**Method** `clone()`: The objects of this class are cloneable with this method.

*Usage:*

```
Year$clone(deep = FALSE)
```

*Arguments:*

`deep` Whether to make a deep clone.

### Examples

```
if (interactive()) {  
  x <- Year$new(1520)  
  x$take(15, type = "june")  
}
```

# Index

## \* **datasets**

languages, [4](#)

midas, [4](#)

schemes, [6](#)

Century, [2](#)

Decade, [3](#)

languages, [4](#)

midas, [4](#)

Periods, [5](#)

schemes, [6](#)

unstruwwel, [7](#)

unstruwwel::Periods, [2](#), [3](#), [8](#)

Year, [8](#)