

# Package ‘xyloplot’

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**Type** Package

**Title** A Method for Creating Xylophone-Like Frequency Density Plots

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**Description** A method for creating vertical histograms sharing a y-axis using base graphics.

**License** GPL (>= 2)

**Suggests** knitr

**VignetteBuilder** knitr

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**NeedsCompilation** no

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 xyloplot-package

*A Method for Creating Xylophone-Like Frequency Density Plots*


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### Description

A method for creating vertical histograms sharing a y-axis using base graphics.

### Details

xyloplot provides a generic method for plotting frequency density plots in the style of histograms akin to violin plots for numeric vectors and lists of numeric vectors.

### Author(s)

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### Examples

```
xyloplot(rnorm(1000))
xyloplot(lapply(1:3, function(mean) rnorm(mean=mean, n=1000)), col=rainbow(3))
```

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 xyloplot

*Method for creating xyloplots*


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### Description

Plots xylophone(s) [essentially vertical histograms] for the input vector(s), provided either as a single vector or list of vectors. Either numeric vectors or character vectors/factors are admissible. If numeric vectors are provided, `cut` will be used to aggregate values, whereas if character vectors or factors are provided, each 'level' will get it's own 'key'. Note, that the height of the plot/length of the level labels may need adjusting to fit. A second vector or list of vectors can be provided as the `rhs` argument. If so, 'split' xyloplots are created, with the left hand sides corresponding to distributions in `x` and right hand sides corresponding to distributions in `rhs`. Note that if `rhs` is not null, it must have the same class as `x`, and if it is a `list`, it must be the same length as `x` and it's elements must be the same class as those in `x`.

### Usage

```
xyloplot(x, rhs = NULL, ...)
```

### Arguments

<code>x</code>	Vector or list of vectors to use for creating xyloplots.
<code>rhs</code>	If not <code>NULL</code> , causes xyloplot to split xylophones and forms the distribution(s) for right hand side xylophones, complementary to the left hand side ones reflecting <code>x</code> .
<code>...</code>	Other arguments to be passed to <code>xyloplot.list</code> and <code>plot</code> .

**See Also**

xyloplot.list xyloplot.numeric

**Examples**

```

xyloplot(rnorm(1000))
xyloplot(
  x=lapply(1:3, function(mean) rnorm(mean=mean, n=1000)),
  breaks=20,
  col=rainbow(3),
  main="title")
xyloplot(
  replicate(n=5, simplify=FALSE,
    expr=factor(sample(c(0.01, 0.1, 0.2, 0.25, 0.5, 1), size=10, replace=TRUE))),
  col=rainbow(5))
xyloplot(
  sample(c("goldfish", "cat", "dog", "fish", "mouse", "giraffe"),
    size=100, replace=TRUE))

```

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xyloplot.character      *Function for creating xyloplots from character vectors*

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**Description**

Function for creating xyloplots from character vectors

**Usage**

```

## S3 method for class 'character'
xyloplot(x, rhs = NULL, ...)

```

**Arguments**

x	Character vector of values.
rhs	If not NULL, causes xyloplot to split xylophones and forms the distribution(s) for right hand side xylphones, complementary to the left hand side ones reflecting x.
...	Other arguments passed to <a href="#">xyloplot.list</a> .

**See Also**

xyloplot.list

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xyloplot.factor	<i>Function for creating xyloplots from factor vectors</i>
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**Description**

Function for creating xyloplots from factor vectors

**Usage**

```
## S3 method for class 'factor'
xyloplot(x, rhs = NULL, ...)
```

**Arguments**

x	Character vector of values.
rhs	If not NULL, causes xyloplot to split xylophones and forms the distribution(s) for right hand side xylophones, complementary to the left hand side ones reflecting x.
...	Other arguments passed to <a href="#">xyloplot.list</a> .

**See Also**

[xyloplot.list](#)

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xyloplot.list	<i>Function for creating multiple xyloplots sharing a y-axis from lists of numeric vectors</i>
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**Description**

Function for creating multiple xyloplots sharing a y-axis from lists of numeric vectors

**Usage**

```
## S3 method for class 'list'
xyloplot(x, rhs = NULL, discrete = !is.numeric(unlist(c(x,
  rhs), use.names = FALSE)), breaks = if (discrete) seq(from = 0.5, by = 1,
  length.out = length(levels(factor(unlist(c(x, rhs), use.names = FALSE)))) + 1)
  else 30, ylim = if (discrete) { range(breaks) } else { if
  (length(breaks) == 1) range(unlist(c(x, rhs), use.names = FALSE)) +
  c(-1, 1) * diff(range(unlist(c(x, rhs), use.names = FALSE)))/((breaks - 1) *
  2) else range(breaks) }, space = 0.1, ylab = "Value", xlab = if
  (freq) "Frequency" else "Frequency density", freq = FALSE, ...)
```

**Arguments**

x	List of numeric vectors of values.
rhs	If not NULL, causes xyloplot to split xylophones and forms the distribution(s) for right hand side xylophones, complementary to the left hand side ones reflecting x.
discrete	Logical value indicating whether to treat values as discrete (suitable for character vectors and factors) or continuous (suitable for numeric vectors).
breaks	A single positive integer value giving the number of histogram classes to evenly split the values in x into, or a numeric vector explicitly giving the boundaries of the histogram classes.
ylim	Limits of the y-axis.
space	The proportion of the total distance on the x-axis allocated to each 'xylophone' which should be left blank.
ylab	Label for y-axis.
xlab	Label for x-axis.
freq	Logical value. If TRUE, the frequencies/counts of data points falling in each interval are represented. If FALSE (default), the frequency density of data points in each interval are represented.
...	Other arguments to be passed to <a href="#">plot</a> .

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xyloplot.numeric      *Function for creating xyloplots from numeric vectors*

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**Description**

Function for creating xyloplots from numeric vectors

**Usage**

```
## S3 method for class 'numeric'
xyloplot(x, rhs = NULL, ...)
```

**Arguments**

x	Numeric vector of values.
rhs	If not NULL, causes xyloplot to split xylophones and forms the distribution(s) for right hand side xylophones, complementary to the left hand side ones reflecting x.
...	Other arguments passed to <a href="#">xyloplot.list</a> .

**See Also**

[xyloplot.list](#)

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xylo_positions	<i>Get x-axis positions of n xylophones</i>
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**Description**

Get x-axis positions of n xylophones

**Usage**

```
xylo_positions(n)
```

**Arguments**

n	Number of xylophones
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