folded_aspect

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The function uses aspect (in degrees) and returns folded aspect, i.e. the value of the aspect "folded" along selected axis (e.g. NE–SW). The formula for folded aspect (modified from McCune & Keon 2002) is:

$$aspect_{folded} = |180 - |aspect - (180 + \alpha)||$$

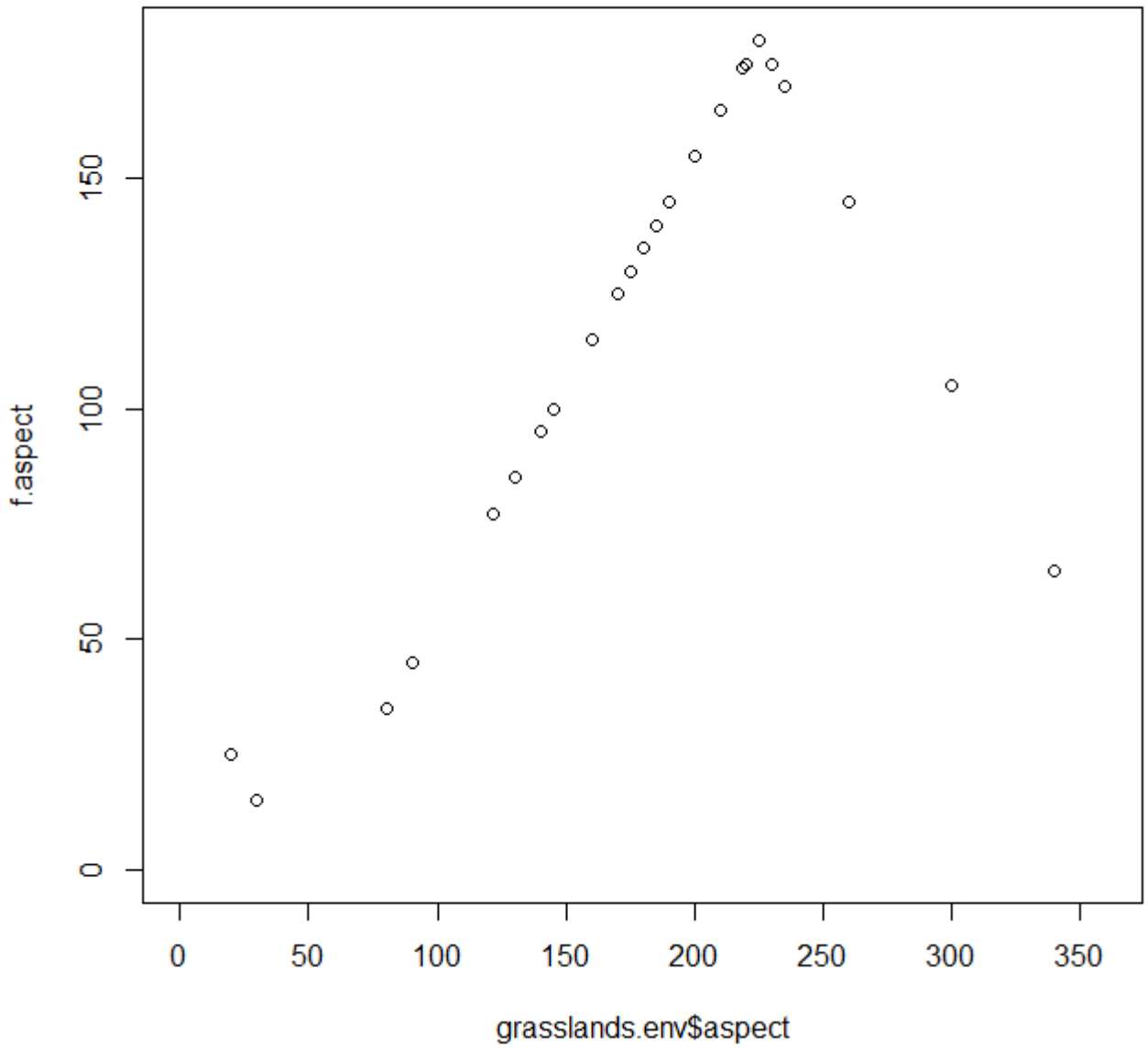
where *aspect* is the measured value of aspect, and alpha is the aspect for which the folded aspects should be zero (for folding along NE-SW axis, alpha = 45°). The formula works only for values of alpha in the range 0-180°.

folded_aspect.r

```
folded_aspect <- function (aspect, alpha = 45)
{
  if (alpha > 180) stop ('Alpha must be in range between 0 and 180 degrees!')
  fa <- abs (180 - abs (aspect - (180+alpha)))
  return (fa)
}
```

Example of the use on the dataset `grasslands.env` (acidophilous grasslands in Třebíč region, Czech Republic). The `grasslands.env` contains variables `aspect`, `slope` and `latitude`, all in degrees. Dataset represents small plots (16-25m2) located on convex outcrops in the agricultural landscape, covered by seminatural grassland vegetation.

```
source
('http://anadat-r.davidzeleny.net/doku.php/en:customized_functions:folded_aspect?do
=export_code&codeblock=0') # reads the function definition from above
grasslands.env <- read.delim
('https://raw.githubusercontent.com/zdealveindy/anadat-r/master/data/grasslands-env
.txt') # loads the file
# Calculat folded aspect from grasslands.env$aspect:
f.aspect <- folded_aspect (aspect = grasslands.env$aspect, alpha = 45)
plot (f.aspect ~ grasslands.env$aspect) # plots values of folded aspect against the
original aspect
```



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