Numerical classification

TWINSPAN - hierarchical divisive classification

Theory R functions Examples Exercise 🔒

library (twinspanR)

I created an experimental R library `twinspanR` with the TWINSPAN algorithm - you may install it from GitHub repository (note: this library is currently in beta stage under development, and some parts may not be functional). To install any library from GitHub, you will need to first install the package `devtools` written by Hadley Wickham, which contains a set of tools for development of R packages. After installing `devtools`, use the function `install_github`. Note that the use of the library has some limitations: it can be installed only on Windows platform (since the engine of the library is based on running *.exe file externally) and you need a permanent access to the folder where the library is installed (usually in Program Files/R/R-x.x.x/library, but could be also in some other personalized place). Without the access to this folder the function `twinspan` cannot run correctly.

For more details see my blog post.

Install the library

```
install.packages ('devtools')
devtools::install_github("zdealveindy/twinspanR")
```

Example

Run TWINSPAN example[1], which shows modified TWINSPAN on traditional Ellenberg's Danube meadow dataset, projected on DCA ordination diagram and compared with original classification into three vegetation types (plus one not-classified releve) made by tabular sorting:

```
library (twinspanR)
library (vegan)
data (danube)
res <- twinspan (danube$spe, modif = TRUE, clusters = 4)
k <- cut (res)
dca <- decorana (danube$spe)
par (mfrow = c(1,2))
ordiplot (dca, type = 'n', display = 'si', main = 'Modified TWINSPAN')
points (dca, col = k)
for (i in c(1,2,4)) ordihull (dca, groups = k, show.group = i, col = i,
 draw = 'polygon', label = TRUE)
ordiplot (dca, type = 'n', display = 'si', main = 'Original assignment\n
(Ellenberg 1954)')
```

```
points (dca, col = danube$env$veg.type)
for (i in c(1:3)) ordihull (dca, groups = danube$env$veg.type,
 show.group = unique (danube$env$veg.type)[i], col = i,
 draw = 'polygon', label = TRUE)
```
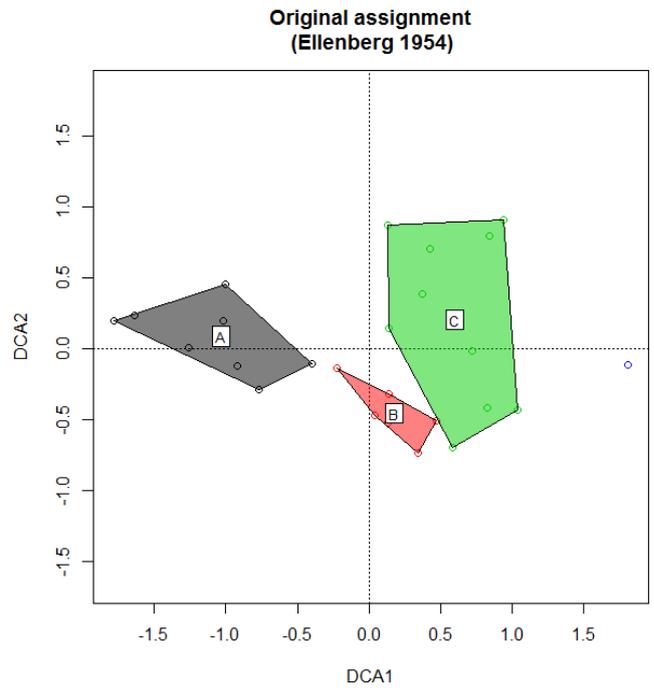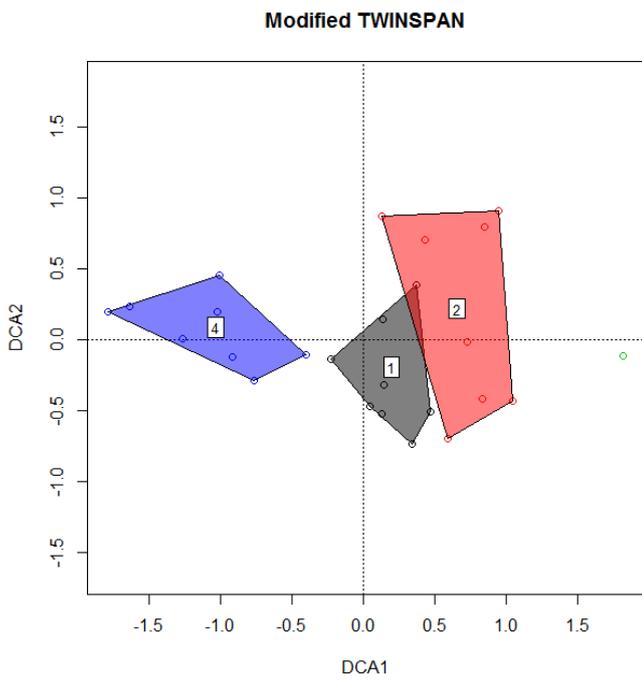

[1)]

You would get the same result as the script below if you run example (twinspan) - this will run the

example which comes with the help file of `twinspan` function (see the section *Examples* in `?twinspan`).

From:
https://anadat-r.davidzeleny.net/ - **Analysis of community ecology data in R**

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https://anadat-r.davidzeleny.net/doku.php/en:hier-divisive?rev=1492822375

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