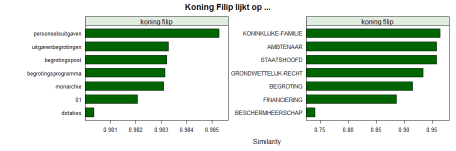
Some things you’ll learn … is that King Filip of Belgium is similar to public expenses if we just look at open data from questions and answers in Belgian parliament (retrieved from here [http://data.dekamer.be](http://data.dekamer.be/)). Proof is below. See you next week.

library(ruimtehol)  
library(data.table)  
library(lattice)  
library(latticeExtra)  
data("dekamer", package = "ruimtehol")  
dekamer$x <- strsplit(dekamer$question, "\\W")  
dekamer$x <- lapply(dekamer$x, FUN = function(x) setdiff(x, ""))  
dekamer$x <- sapply(dekamer$x, FUN = function(x) paste(x, collapse = " "))  
dekamer$x <- tolower(dekamer$x)  
dekamer$y <- strsplit(dekamer$question\_theme, split = ",")  
dekamer$y <- lapply(dekamer$y, FUN=function(x) gsub(" ", "-", x))  
set.seed(321)  
model <- embed\_tagspace(x = dekamer$x, y = dekamer$y,   
                        early\_stopping = 0.8, validationPatience = 10,  
                        dim = 50,   
                        lr = 0.01, epoch = 40, loss = "softmax", adagrad = TRUE,   
                        similarity = "cosine", negSearchLimit = 50,  
                        ngrams = 2, minCount = 2)embedding\_words  <- as.matrix(model, type = "words")  
embedding\_labels <- as.matrix(model, type = "labels", prefix = FALSE)  
embedding\_person <- starspace\_embedding(model, tolower(c("Theo Francken")))  
embedding\_person <- starspace\_embedding(model, tolower(c("Koning Filip")))  
similarities <- embedding\_similarity(embedding\_person, embedding\_words, top = 9)  
similarities <- subset(similarities, !term2 %in% c("koning", "filip"))  
similarities$term <- factor(similarities$term2, levels = rev(similarities$term2))  
plt1 <- barchart(term ~ similarity | term1, data = similarities,   
         scales = list(x = list(relation = "free"), y = list(relation = "free")),  
         col = "darkgreen", xlab = "Similarity", main = "Koning Filip lijkt op ...")similarities <- embedding\_similarity(embedding\_person, embedding\_labels, top = 7)  
similarities$term <- factor(similarities$term2, levels = rev(similarities$term2))  
plt2 <- barchart(term ~ similarity | term1, data = similarities,   
         scales = list(x = list(relation = "free"), y = list(relation = "free")),  
         col = "darkgreen", xlab = "Similarity", main = "Koning Filip lijkt op ...")  
c(plt1, plt2)