FOOD-OPERA

Wer mit wem?

ABSTRACT

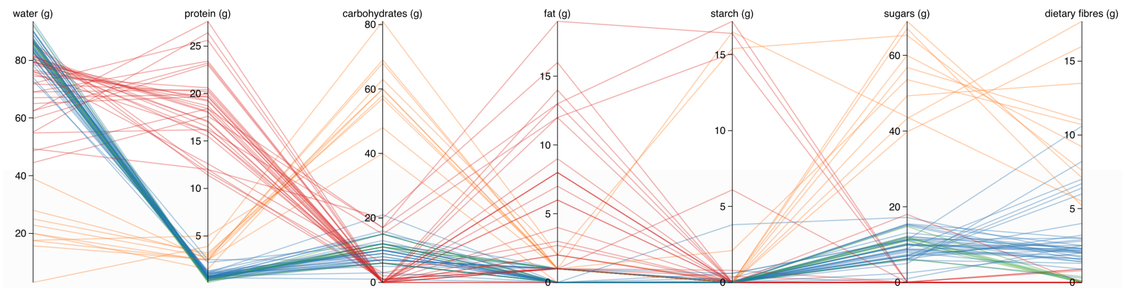
There are a lot of opinions on food. Some specific foods receive more attention than others, some are despised, some are venerated and some are ignored. With this poster we show that being narrow-minded regarding nourishment also narrows one's possible nutrient intake and the healthy combinations or substitutes that are easily available to everyone.

GOAL

The goal of the main chart the basic correlation between nutrient contents and energy content. With that as a reference some specific foods are shown in more detail to highlight outsiders, possible friendships but also competing foods from different categories.

THE DATA AND THE PROCESS

The database [1] that was used holds information about the composition of foods available in Switzerland. 961 generic and 9617 branded foods are stored with their nutrient contents like sugar, protein or vitamins. To produce more general information from our analysis we focused on the generic foods and disregarded the branded foods.
The problem at hand was comparing a lot of data points with more than three available dimension for which the parallel coordinates visualization was chosen and was of great use. Exploration was done with a freely available d3.js [2] implementation of parallel coordinates [3] which we adapted to allow simple categorical filtering and coloring. During the exploration a few interesting foods and connections between foods where found and chosen for the presented visualization.



Example of a parallel coordinates visualization of different food categories

Because parallel coordinates are not intuitive for the uninvolved reader the spider chart was chosen as the main visualization and realized in d3.js. This creates a characteristic shape for every food that is representative of its character. Some are spiky extremists while others have more well-rounded personalities.

REFLECTION

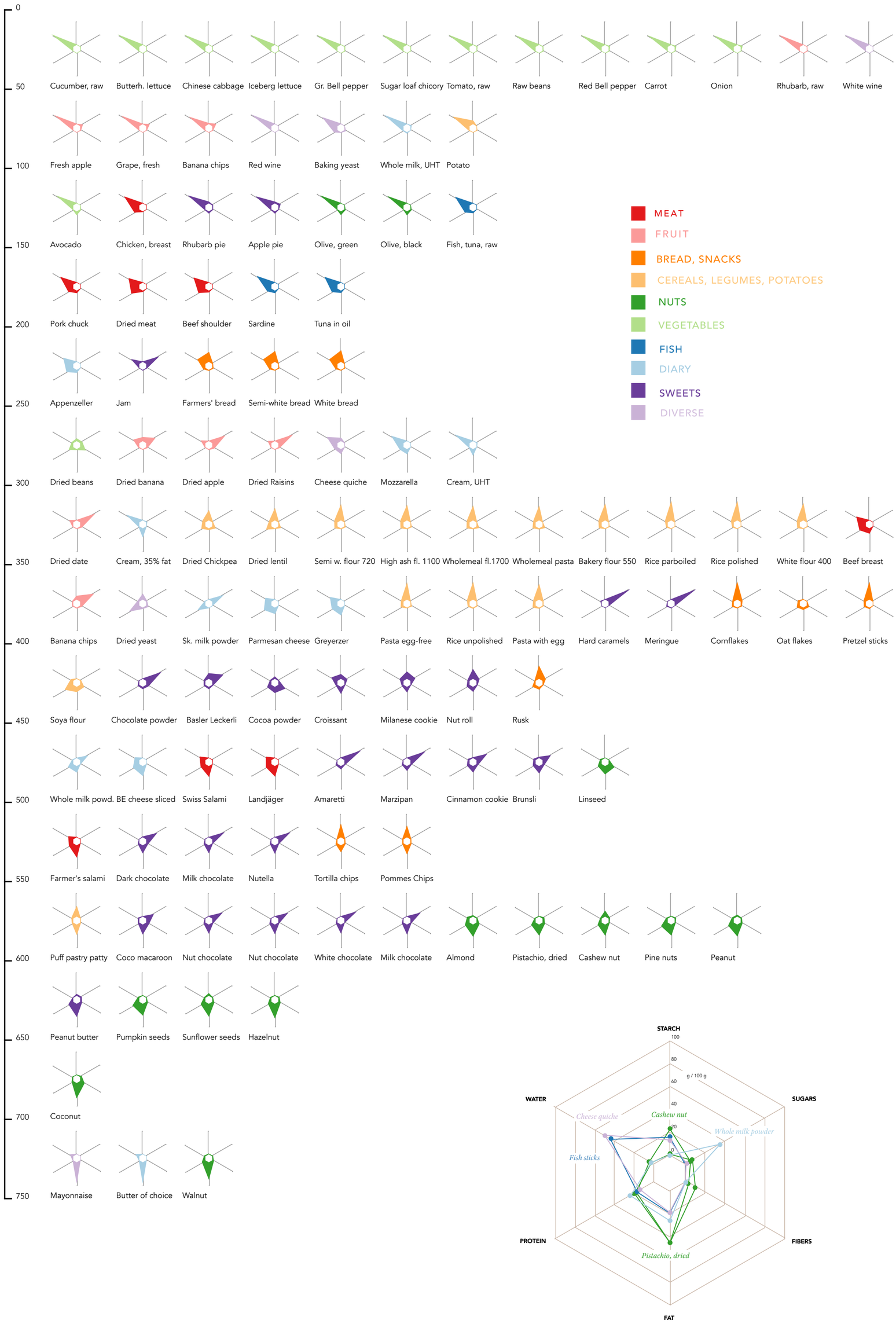
In retrospect, the spider chart was not an optimal choice for the task of comparing the foods. Overlapping dots and lines make it sometimes hard to distinguish the individual items. Additionally, to understand the usefulness of a food in nutrition, it would be more sensible to look at a portion (who eats 100g of dried yeast?) in relation with the daily recommended intake, which differs a lot between the different nutrients. Still, there are a lot of things to like and discover. The relationship between food categories and energy content for example of how a food type can oftentimes be identified by the shape of its chart.

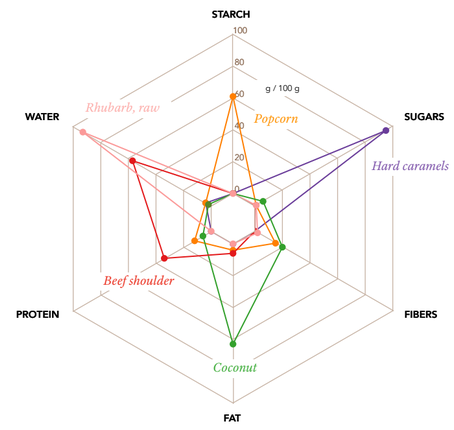
SOURCES

[1] Federal Food Safety and Veterinary Office (2017). Swiss Food Composition Database. [Online]. Available: http://naehrwertdaten.ch. [Accessed: May 8, 2017]

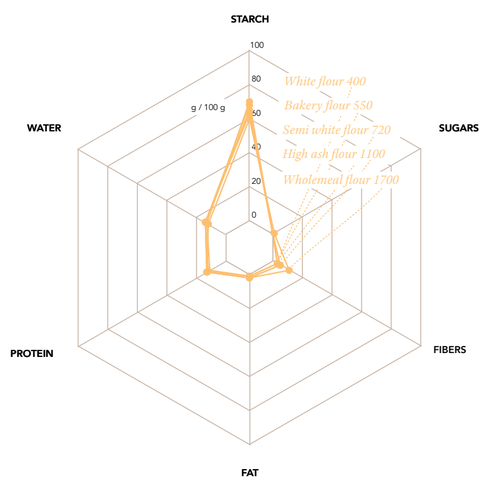
[2] M. Bostock. (2017). D3.js - Data Driven Documents [Software]. Available: https://d3js.org. [Accessed: May 8, 2017]

[3] K. Chang. (2016, June). Parallel Coordinates. [Software] Available: https://syntagmatic.github.io/parallel-coordinates. [Accessed: May 8, 2017]





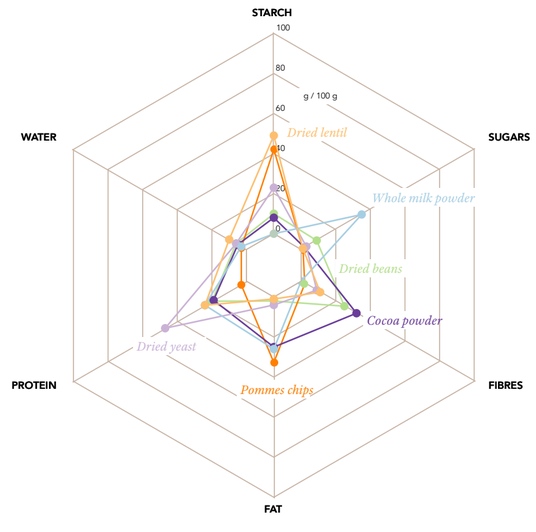
EXTREMISTS: They look somewhat spiky. But as soon as they are mixed in the right way, a very varied company is formed. To bad they seldomly do.



WHEATS: They look so alike, many people don't even realize there are multiple of them. It's time to give them some more distincition. Especially, the higher numbered ones who are rich in fibers.

FAT or SUGAR?: If you've always thought of the fat guys as couch potatoes. Think again, they are high energy. Even more so than the ones on sugar as the big chart above shows nicely.

TEMPERATES: Who would you take to a solitary island? Probably one of the more well-rounded characters. Still, living only on Fish sticks for months is a rather bland perspective.



THE GOOD, THE BAD AND THE UGLY: Some foods get the credit the deserve. Like beans and lentils. Others are painted as the bad guys, having their obvious qualities overlooked. Finally, some, like dried yeast are just not very appetizing.