

## Density Selection

## 1 Why

We have a dataset in some infinite set and want to summarize it by a probability density.

## 2 Overview

We have an set uncountable set of outcomes A. We have a dataset  $(a^1, \ldots, a^n)$ . We want to define a correspondence between the dataset and probability densities over the set of outcomes A.

We will call proposals for such a correspondence **principles** of density selection.

Notice that we do not want a density on the record sequences, we want a density on A on  $A^n$ .