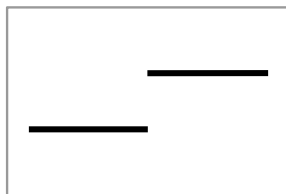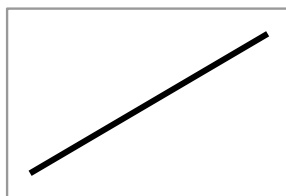Evolutionary rates for the response trait

σ^2

A homogeneous rate throughout the tree.
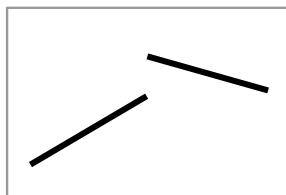
$\sigma^2_{left} \longrightarrow x \leq break$

$\sigma^2_{right} \longrightarrow x > break$

Two homogeneous rate regimes with shifts ocurring at a threshold value of the predictor trait.
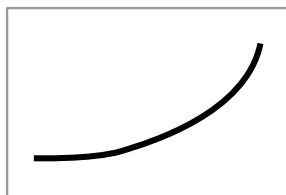
$f(x) = \beta_1 x + \beta_2$

A linear model. Rate changes linearly with the value of the predictor trait.

$f(x) = \beta_{1a} x + \beta_{2a}$
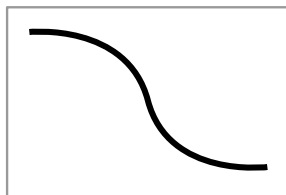$\longrightarrow x \leq break$
$f(x) = \beta_{1b} x + \beta_{2b}$
$\longrightarrow x > break$

A two regimes linear model. Rate changes linearly with the value of the predictor trait, but the linear function shifts at a threshold

$f(x) = c \ x^p$

A power function model. Rate changes over a power function of the value of the predictor trait.

$f(x) = c_1 + \frac{c_2}{1+e^{\beta_1 \ (\beta_2 - x)}}$

A sigmoid function model. This is the most flexible function implemented by default on the 'phylofx' package.

Predictor trait