In[38]:= `rawfig2a = Import[NotebookDirectory[] <> "fig2a_data.csv", "CSV"];`

# Equilibrium calculation

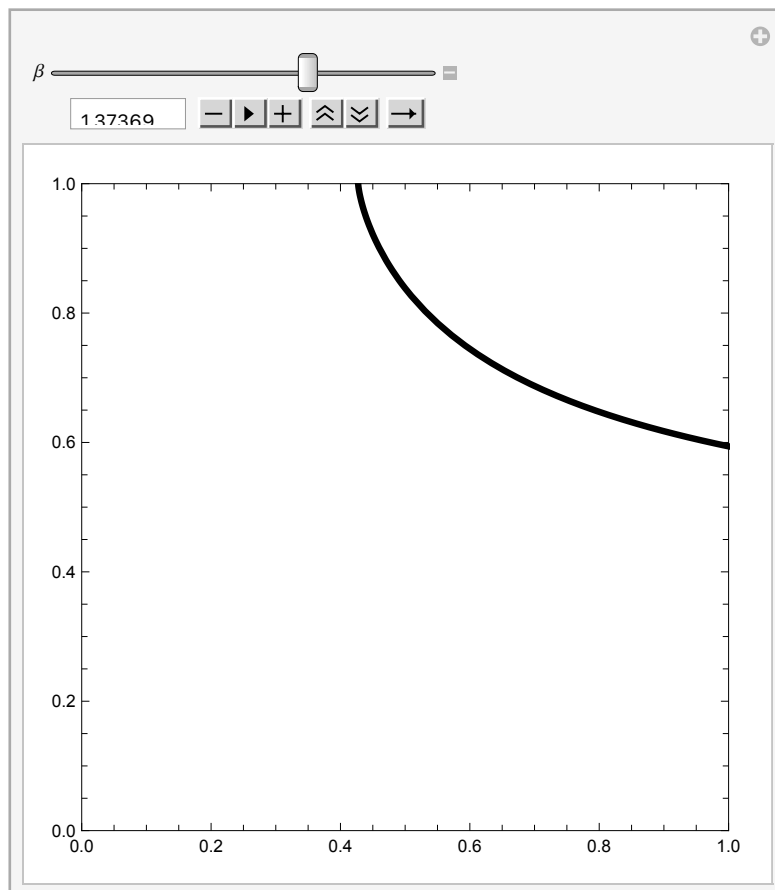In[39]:= $A[u\_, \alpha\_, \gamma\_] := \dfrac{\frac{u}{(1-u)} + 1 - \gamma}{\alpha \gamma}$ ;

$equilibrium[r\_, \beta\_, u\_, \alpha\_, \gamma\_] := \dfrac{1}{\left(\frac{r+1}{A[u,\alpha,\gamma]\,(r-1)+r} - 1\right)^{1/\beta} + 1}$ ;

In[98]:= `q2 = 3; q1 = 2; β =.; u = 0.1; α = 0.8;`

`Manipulate[eq2a = Plot[equilibrium[q2 / q1, β, u, α, γ], {γ, 0, 1},`
`    PlotRange → {{0, 1}, {0, 1}}, PlotStyle → Directive[Black, Thickness[0.01]],`
`    Frame → True, AspectRatio → 1], {β, 0.001, 2}]`

Out[99]=



In[102]:=

`eq2a = Plot[equilibrium[q2 / q1, 2, u, α, γ], {γ, 0, 1}, PlotRange → {{0, 1}, {0, 1}},`
`    PlotStyle → Directive[Black, Thickness[0.01]], Frame → True, AspectRatio → 1];`

# Fig2a

In[83]:= `rawfig2a = Import[NotebookDirectory[] <> "fig2a_data.csv", "CSV"];`

```
In[84]:= heat2a = ListDensityPlot[rawfig2a[2 ;;], PlotRange → All,
        PlotLegends → Placed[BarLegend[Automatic, LegendMargins → {{0, 0}, {10, 5}},
           LegendLabel → "Equilibrium frequency of low-quality morph",
           LabelStyle → {FontFamily → "Calibri"}], Above], Frame → True,
        FrameStyle → Directive[Black, Thickness[0.003]], FrameLabel →
         {Style["Probability of copying, γ", FontFamily → "Calibri", 18], Style[
           "Initial frequency of low-quality morph", FontFamily → "Calibri", 18]}];
```
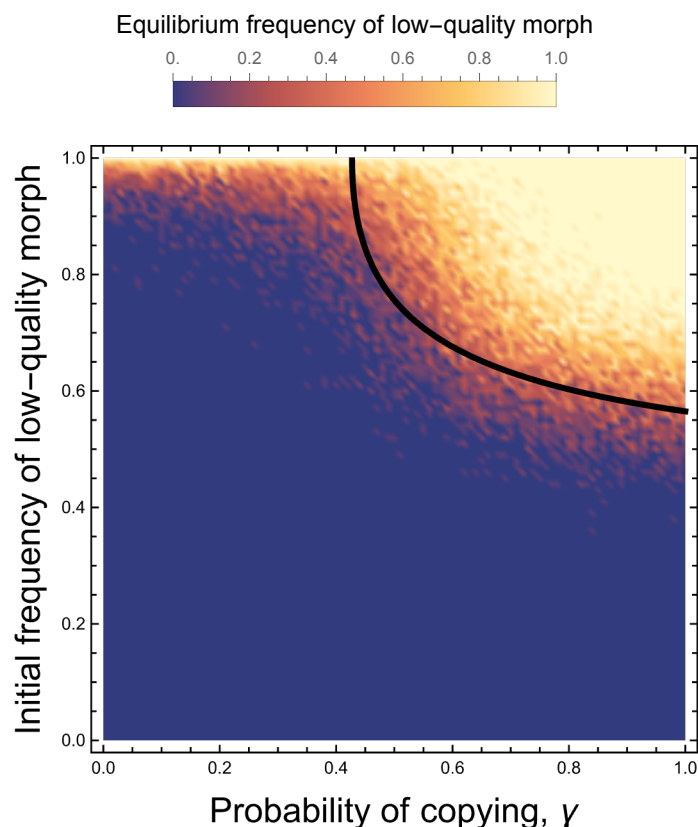
```
In[101]:=
        Show[heat2a, eq2a]
```

Out[101]=



## Fig2b

```
In[86]:= rawfig2b = Import[NotebookDirectory[] <> "fig2b_data.csv", "CSV"];
```

```
In[87]:= heat2b = ListDensityPlot[rawfig2b[2 ;;],
        PlotRange → All, PlotLegends → Placed[BarLegend[Automatic,
           LegendMargins → {{0, 0}, {10, 5}}, LegendLabel → "Normalised fixation time",
           LabelStyle → {FontFamily → "Calibri"}], Above], Frame → True,
        FrameStyle → Directive[Black, Thickness[0.003]], FrameLabel →
         {Style["Probability of copying, γ", FontFamily → "Calibri", 18], Style[
           "Initial frequency of low-quality morph", FontFamily → "Calibri", 18]}];
```

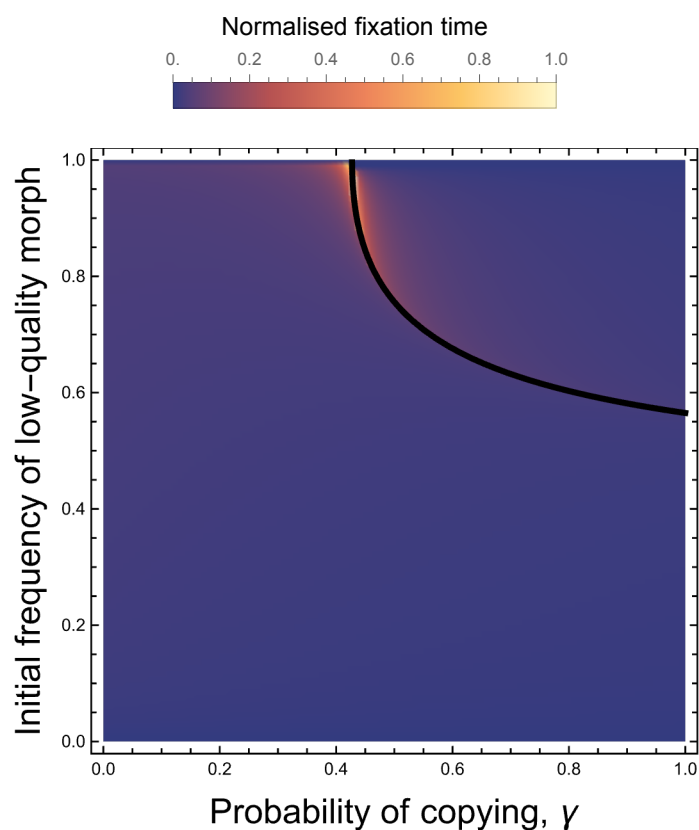*Fig_2.nb* | **3**

In[88]:= `Show[heat2b, eq2a]`

Out[88]=



---

# Fig 2c

In[89]:= `rawfig2c = Import[NotebookDirectory[] <> "fig2c_data.csv", "CSV"];`

In[90]:= 
```
heat2c = ListDensityPlot[rawfig2c[[2 ;;]], PlotRange → All,
    PlotLegends → Placed[BarLegend[Automatic, LegendMargins → {{0, 0}, {10, 5}},
        LegendLabel → "Absolute difference in modified qualities",
        LabelStyle → {FontFamily → "Calibri"}], Above], Frame → True,
    FrameStyle → Directive[Black, Thickness[0.003]], FrameLabel →
     {Style["Probability of copying, γ", FontFamily → "Calibri", 18], Style[
        "Initial frequency of low-quality morph", FontFamily → "Calibri", 18]}];
```

In[91]:= `Show[heat2c, eq2a]`

Out[91]=



Absolute difference in modified qualities