Plotting the Copying function

Type I

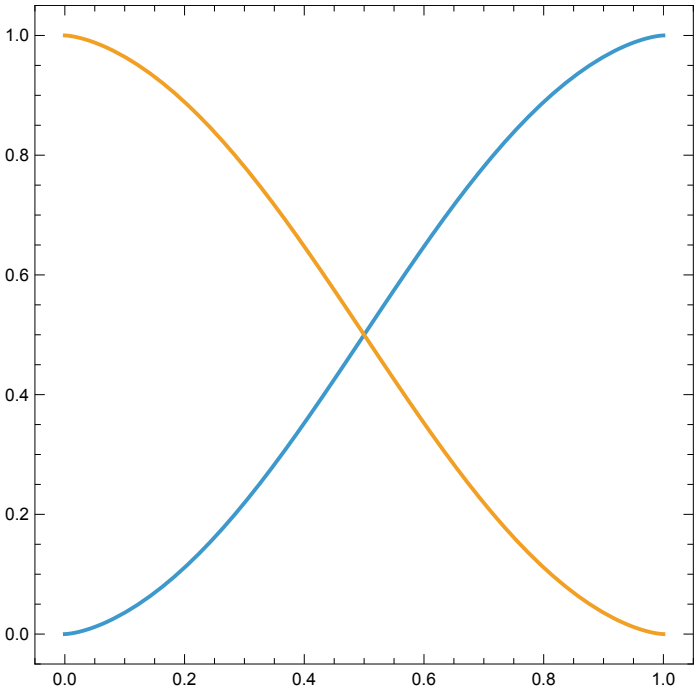
In[190]:=

$$\text{Copying}[\beta\_, y\_] := \frac{y^{\beta}}{y^{\beta} + (1 - y)^{\beta}};$$

In[192]:=

```
Plot[Evaluate[Table[Copying[β, y], {β, {1.5, -1.5}}]], {y, 0, 1},
 PlotRange → {{-0.05, 1.05}, {-0.05, 1.05}}, Frame → True, AspectRatio → 1]
```

Out[192]=



Type II

In[193]:=

```
m = 2;(*Number of morphs*)
factor = 1.2;(*Conformism/anticonformism factor*)
kindofcopying =.;(*What kind of copying? conformism or anticonformism*)
```

In[196]:=

```
chooseD[y_, kindofcopying_] := 1/factor If[kindofcopying == "conformism",
    (1/Max[y] - 1) Sum[If[y[[j]] > 1/m, y[[j]], 0], {j, 1, m}], -Sum[If[y[[j]] > 1/m, y[[j]], 0], {j, 1, m}]];
whichC[yi_, y_, kindofcopying_] :=
 Which[yi == 0, yi, yi == 1, yi, yi == 1/m, yi,
  yi > 1/m, yi + chooseD[y, kindofcopying] yi/Sum[If[y[[j]] > 1/m, y[[j]], 0], {j, 1, m}],
  yi < 1/m, yi - chooseD[y, kindofcopying] (1/yi)/Sum[If[y[[j]] < 1/m, 1/y[[j]], 0], {j, 1, m}]]
```

In[198]:=

```
Copyingcomplex[y_, kindofcopying_] :=
  Table[whichC[y[[i]], y, kindofcopying], {i, 1, m, 1}];
```

In[199]:=

```
result = {};
For[j = 0, j ≤ 1, j = j + 0.01,
  For[k = 0, k ≤ 1, k = k + 0.01, If[j + k == 1.0, AppendTo[result, {j, k}]]]];
result // Chop;
```

In[202]:=

```
cpresultconformism = Copyingcomplex[#, "conformism"] & /@ result;
cpresultanti = Copyingcomplex[#, "anticonformism"] & /@ result;
```

In[204]:=

```
ListPlot[{Table[
   {result[[All, 1]][[i]], cpresultconformism[[All, 1]][[i]]}, {i, 1, Length[result]}],
  Table[{result[[All, 1]][[i]], cpresultanti[[All, 1]][[i]]}, {i, 1, Length[result]}]},
 Joined → True, PlotRange → {{-0.05, 1.05}, {-0.05, 1.05}},
 Frame → True, AspectRatio → 1]
```

Out[204]=