MOTIVATION

* Improve/extend population models used in "Multiple Model" Adaptive Control.

  - Extend distribution to larger sample space

  - Smooth discrete priors

  - Accept population data from other studies and convert to discrete distribution

* Will use maximum entropy methods to extend/create distributions.

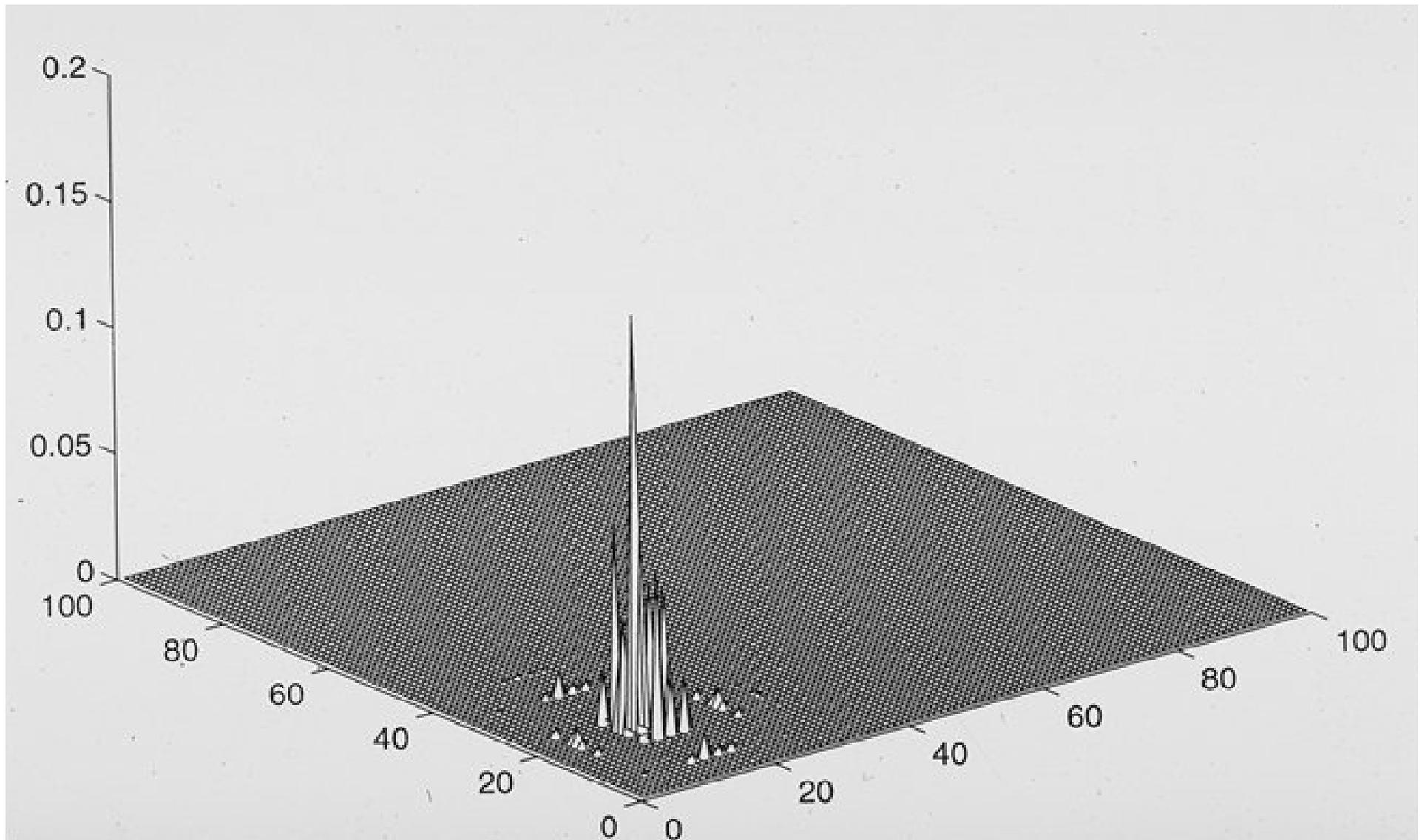**Entropy:**

Putting all eggs into one basket is less random than putting an egg into each basket!

How many ways can we put 3 balls into two boxes or categories?

(I)   ● ● ●

(II)   ● ●   ●

(III)   ●   ● ●

(IV)   ● ● ●

1 way for (I), (IV)
3 ways for (II), (III)

The least informed, most skeptical, maximum entropy discrete joint density