

Model Thinking

Scott E Page

Competition

96 market

GM	30%
Ford	20%
Toyota	20%
Chrysler	10%
	.
	,
	/

	W	L
AC Milan	14	6
Ascoli	7	13
Atalanta		
Cagliari		
Catania		
Chievo		
Empoli		

Many Models

Random

Skill plus luck

Finite Memory Random

Blotto model

Random

Equal Wins

No time dependency

Skill Plus Luck

Unequal Wins

Semi – Consistent Rankings

No time dependency

Finite Memory Random Walk

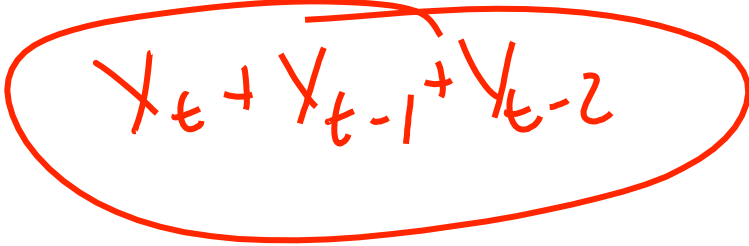
Unequal

Semi – Consistent Rankings

Time Dependency

Movement from top to bottom


$$\alpha L + (1 - \alpha) S$$


$$Y_t + Y_{t-1} + Y_{t-2}$$

Blotto: Equal Troops

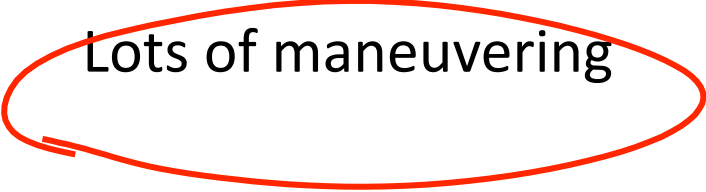
Outcomes same as Random

Lots of maneuvering

Blotto: Unequal Troops

Outcomes same as Skill Luck

Lots of maneuvering



Blotto: Unequal Troops

Limited Movement

Outcomes same as Finite Walk

Lots of maneuvering

Cycles

Blotto or Skill-Luck?

Dimensionality: if players are making high dimensional strategic decisions then it's more Blotto like

Zero sum: if actions are only good relative to other actions (invading from the east) then it may be more Blotto like.

Presidential Election

Random: economic shock

Luck Skill: candidates vary in
their skill

Random Walk: sequence of
“events”

Blotto: Requires allocating
resource across “fronts”

Model Thinking

Scott E Page