

Macro Roundup Article

Headline: [Pattern Recognition](#)

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Tweet: Human pattern recognition tends to fail in "domains where causality and feedback are limited" as humans tend to see patterns where they do not exist. @mjmauboussin

Summary: Humans are natural pattern seekers. Pattern recognition often fails in complex and evolving environments. The economist Blake LeBaron is a leader in the field of agent-based modeling. These are models that create agents in silico, provide them with decision rules, and let them trade an asset among themselves. He finds that the asset price rises even as the diversity of decision rules declines because the similar trading strategies reinforce the price movement. But at some point the market becomes fragile. At that critical juncture, a small incremental loss of diversity leads to a sharp plunge in the asset price because the buyers are exhausted. The relationship between diversity loss and asset price change is non-linear. Diversity breakdowns fit a pattern but measuring diversity is inherently difficult. Pattern recognition can also fail because of how our minds love to think in analogies. Steps include selection, mapping, evaluation, and learning. To understand a target topic we commonly start by selecting an analog, usually from memory.

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