AI and the Game of Markets

Ben Hunt
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How Does a Horse Run?

Frederic Remington, A Dash for the Timber (1889)

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How Does a Horse Run?

Leland Stanford

Eadweard Muybridge
How Does a Horse Run?

The Unromantic Truth
AI Processes (Visualizes) Unstructured Data

*AI lets us ask better questions.*

Even if the answers are unromantic!
Another Unromantic Truth

Quality factor useless since QE began

Source: Bloomberg L.P., as of 12/19/2017. For illustrative purposes only.
Another Unromantic Truth

Hedge Fund convexity vanished since QE began

Source: Bloomberg L.P., as of 02/27/2018. For illustrative purposes only.
How Does a Market Run Without Quality?

Central banks have purchased more than $20 Trillion of financial assets, lifting the price of ALL financial assets.

*How does that work?*

Source: Bloomberg L.P., as of 12/19/2017. For illustrative purposes only.
Central Bankers Call it Communication Policy

The crisis has passed, but I think the Fed’s need to educate and explain will only grow. — Ben Bernanke, November 19, 2013
The Common Knowledge Game

On the Island of the Green-Eyed Tribe, blue eyes are taboo. If you have blue eyes you must get in your canoe and leave the island the next morning.

There are no mirrors on the island, so you don’t know the color of your own eyes. It is also taboo to talk with each other about eye color, so when you see a fellow tribesman with blue eyes, you say nothing.

A Missionary comes to the island and announces to everyone, “At least one of you has blue eyes.”

What happens?
The Power of the Crowd Watching the Crowd
The Power of the Crowd Watching the Crowd

2009 Obama inauguration

2017 Trump inauguration

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Our Modern Missionaries
And Our Missionary-in-Chief
Media Barons Have Known This Forever
Even Today

Mark Zuckerberg

For illustrative purposes only.
Even Today
Wall Street Has Known This Forever

Andrew Carnegie  Jay Gould  Cornelius Vanderbilt

For illustrative purposes only.
Wall Street Has Known This Forever

Henry Blodget and Frank Quattrone in happier days … although it worked out okay for both in the end.
Even Today

For illustrative purposes only. Past performance is no guarantee of future results.
Then

War is too important to be left to the generals.
— Georges Clemenceau (1841 – 1929)
Now

Markets are too important to be left to investors.
— Team Elite

For illustrative purposes only.
Use AI to Visualize Missionary Narratives
Use AI to Visualize Narrative Networks

Text Analytics Background

Quid reads any text to identify key words, phrases, people, companies and institutions.

Then it compares words from each document to create links between them based on similar language.

Quid repeats the process at immense scale, producing a network that shows how similar all the documents are to one another.

Source: Quid, Inc. For illustrative purposes only. Past performance is no guarantee of future results. Quid, Inc. is not an affiliate of Salient. Software used under license.
What Does the Mexico Narrative Look Like?

TMT (11%)  
Auto (3.9%)  

Credit ratings (0.73%)  
Rates (3.8%)  

Company news (4.9%)  
Peso news (7.1%)  
Peso trade (2.6%)  
Oil (3.0%)  

Infrastructure (3.1%)  
Construction (3.1%)  

Pharma (4.0%)  
Trump (4.7%)  
Auto (3.9%)  

CPI / Inflation (1.8%)  

Source: Quid, Inc. For illustrative purposes only. Past performance is no guarantee of future results. Quid, Inc. is not an affiliate of Salient. Software used under license.

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What Does the Mexico Narrative Look Like?
What Does the Trump Narrative Look Like?

- Bloomberg Narrative re:Trump Election week T-5 to T-2
- Bloomberg Narrative re:Trump Election week T-1
- Bloomberg Narrative re:Trump Election week T+1

Source: Quid, Inc. For illustrative purposes only. Past performance is no guarantee of future results. Quid, Inc. is not an affiliate of Salient. Software used under license.
The Evolution of Market Technology
AI Doesn’t Replace Humans - It Saves Them
What To Do? Think Critically

Don’t Be the Sucker at the Table
What To Do? Think Critically

Don’t Be the Sucker at the Table
What To Do? Think Differently

Agnostic, Narrative-Aware Portfolios

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epsilontheory.com
AI Powered by Videogame Processors

Lara Croft

FROM 540 POLYGONS IN 1996

TO MOTION CAPTURE REALISM IN 2013
## How AI Works (NOT One Big Brain)

### Hybrid Neural Nets

<table>
<thead>
<tr>
<th>Feature</th>
<th>ES</th>
<th>FS</th>
<th>NN</th>
<th>GA</th>
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<tr>
<td>Knowledge representation</td>
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<td></td>
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<tr>
<td>Uncertainty tolerance</td>
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<tr>
<td>Imprecision tolerance</td>
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<td>Adaptability</td>
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<td>Knowledge discovery and data mining</td>
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<td>Maintainability</td>
<td></td>
<td>✓</td>
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</tbody>
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What’s Next With AI (Quantum Compute)

\[ n^2 \text{ vs. } 2^n \]

1,000 squared is 1,000,000
2 to the 1,000th power is 1 with 300 zeros

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