

AI, Data, and Incentive Machines

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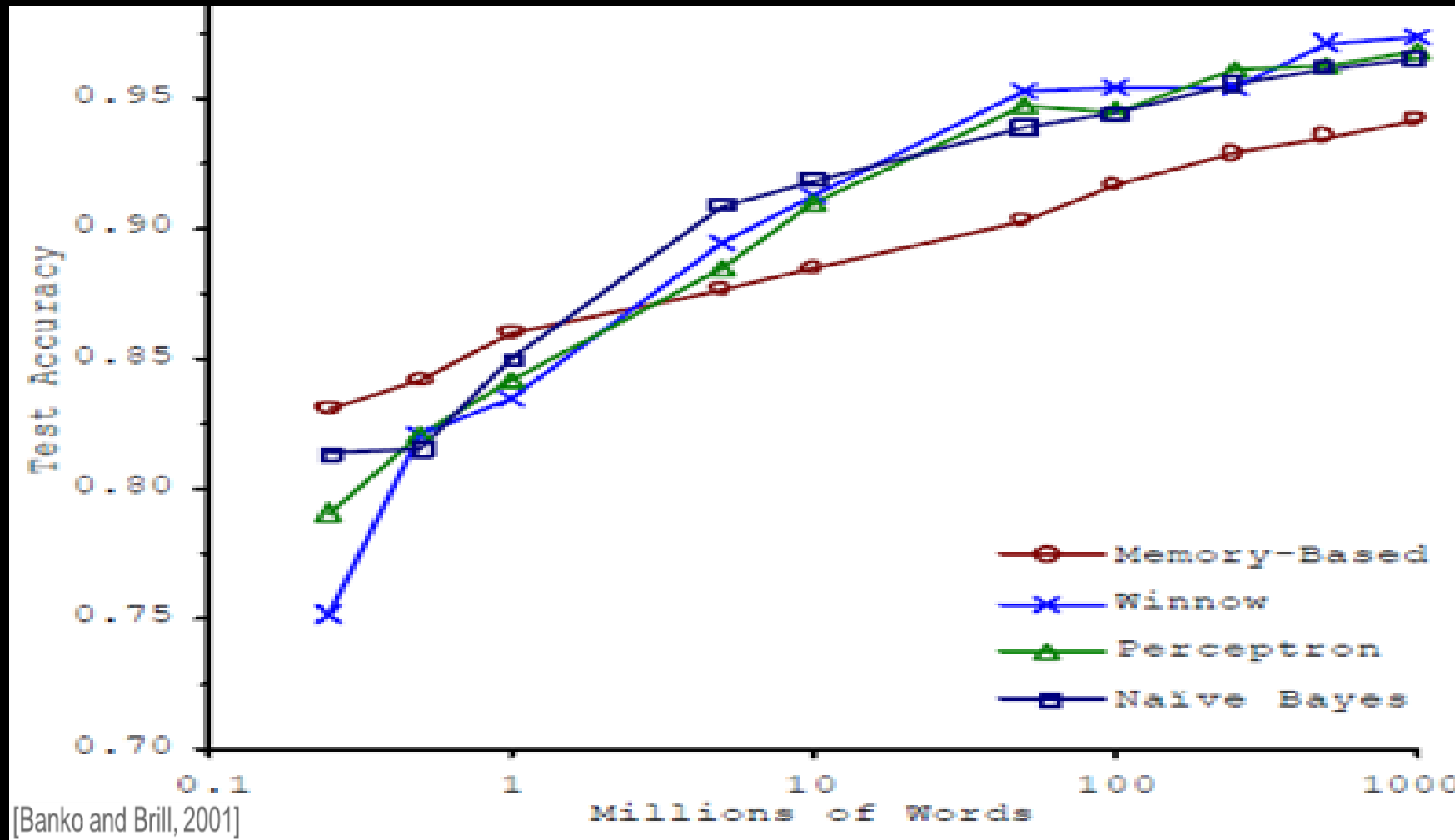


#Data
#Incentives



Audio radar

The Unreasonable Effectiveness of Data



1000%
less
error!

1000x *more* data

The world's most valuable resource



Data and the new rules
of competition

Silo mo' data



Mo' accuracy



Mo' \$

Default incentive:
hoard the data

**“Show me the incentive
and I will show you the outcome.”**

-Charlie Munger



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FB's Schelling point is data silos. No amount of apologies or promises, or even data governance boards, will change that. You need to change the core of FB: the incentives, the Schelling point.



Change the
incentives!

~~Site~~ *Pool* mo' data



Mo' accuracy



Mo' \$

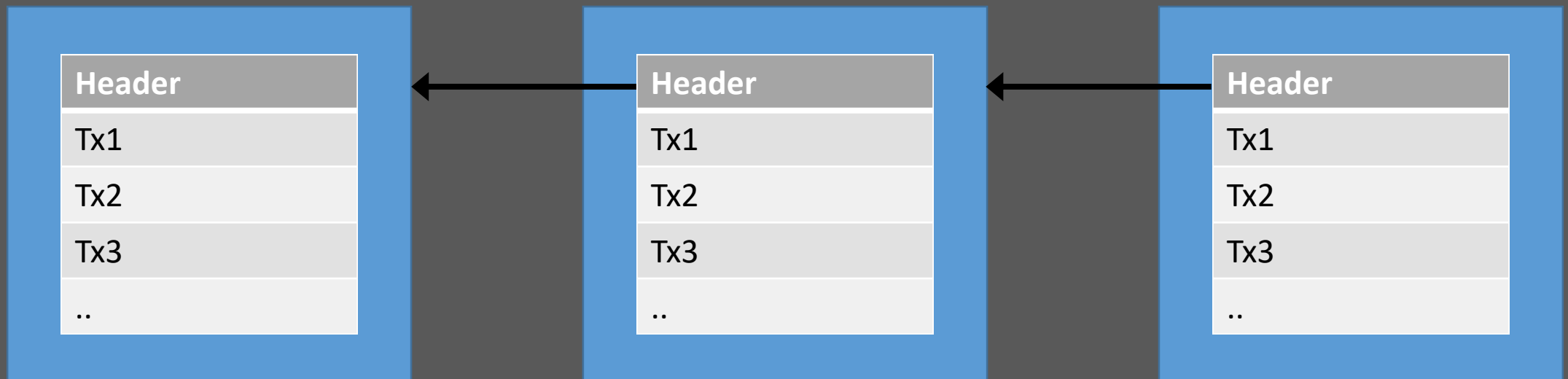
So how do we change the incentives?



Blockchain (and ways to frame it)

“A Chain of Blocks”

- Block = list of transactions, where tx = “create asset” or “transfer asset” action, digitally signed
- Chain = linked list, where links are hashes



“Database with blue ocean benefits”

- Decentralized
- Immutable
- Assets



INSIDE: A 12-PAGE SPECIAL REPORT ON COLOMBIA

The
Economist

OCTOBER 31ST-NOVEMBER 6TH 2013

Economist.com

007 and the spectre of Britain's past
Turkey votes to the sound of bombs
Those ever-creative accountants
America takes the fight to IS
Coywolves: the new superpredator

The trust machine

How the technology behind bitcoin
could change the world



“Trust machine”
because it minimizes
trust needed to
operate.

It's more *socially*
scalable. (Ref Szabos)

“Public Utility Network” Self-sustaining, anti-fragile





“Incentive Machine”

**You can get people to do stuff
by rewarding them with tokens.**



Bitcoin objective function

Objective: Maximize security of network

- Where “security” = compute power
- Therefore, super expensive to roll back changes to the transaction log

$$E(R_i) \propto H_i * T$$

$E()$ = expected value **block rewards** **hash power of actor = contribution to “security”** **# tokens (BTC) dispensed each block**

Result of Bitcoin's objective function:

People are maximizing security! = Maximizing electricity

More power than USA by mid 2019



“Incentive Machine”

You can get people to do stuff
by rewarding them with tokens.

This is a superpower.





Change the
incentives!
*Using incentive
machines*

~~Site~~ *Pool* mo' data



Mo' accuracy



Mo' \$

Objective: maximize supply of relevant data

- Reward curating data (staking on it) + making it available
- New pattern: Proofed Curation Market

$$E(R_{ij}) \propto \log_{10}(S_{ij}) * \log_{10}(D_j) * T * R_i$$

Expected
reward for user
 i on dataset j

S_{ij} = predicted popularity
= user's curation market
stake in dataset j

D_j = proofed popularity
= # times made dataset
available

tokens
during
interval

The background of the slide features several jellyfish with glowing blue and cyan bells and long, thin tentacles, floating in a dark blue, slightly hazy environment. A large, prominent jellyfish is centered at the top, with its tentacles extending downwards. Other smaller jellyfish are scattered throughout the scene, some to the left and some to the right, creating a sense of depth and movement.

Token Engineering

General recipe

- Ask: what do you want? Eg what are you trying to maximize
- Philosophy. Simple block reward at the core, emergent complexity.

Examples:

- Block rewards to secure a chain of fin. txs: rewire financial system
- Block rewards to supply & curate data: erode data silos. Global data commons. Democratize AI. Compensate creators. Transparent govt data.
- Block rewards to supply electricity: drives cost of energy down
- Block rewards to move person from A→B: rewire public + private transit from ground up



Conclusion

Blockchains are Incentive Machines

- We can shape incentives!
- We can design & deploy these for societal benefit
- Rewire financial system, erode data silos, rewire power grid, rewire transit, *more*.