Dissolving the Redesign

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Not actually a management consultant
(it was a joke that stuck)

This talk concerns:

The Web

(more than apps)

Infrastructure

(more than product development)

Independents

(more than corporate/in-house)

I've been making things on the Web since 1995
(age 15-16)

I taught myself (roughly in sequence):

- Visual design
- Front-end dev.
- Back-end dev.
- Sysadmin
- DBA
- Data viz
- Information architecture
- Interaction design
- Content strategy

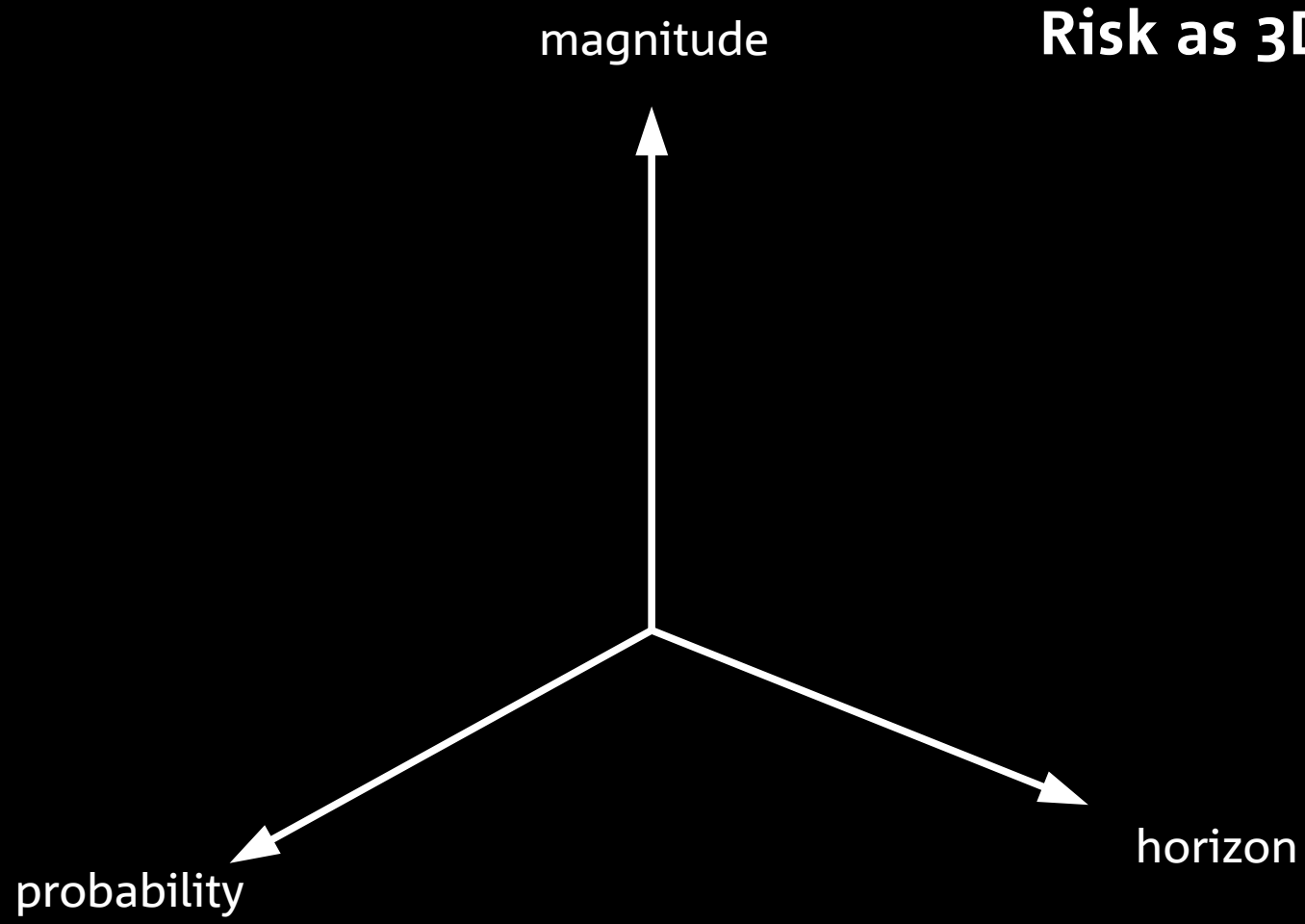
= ?

The Story & The Problem

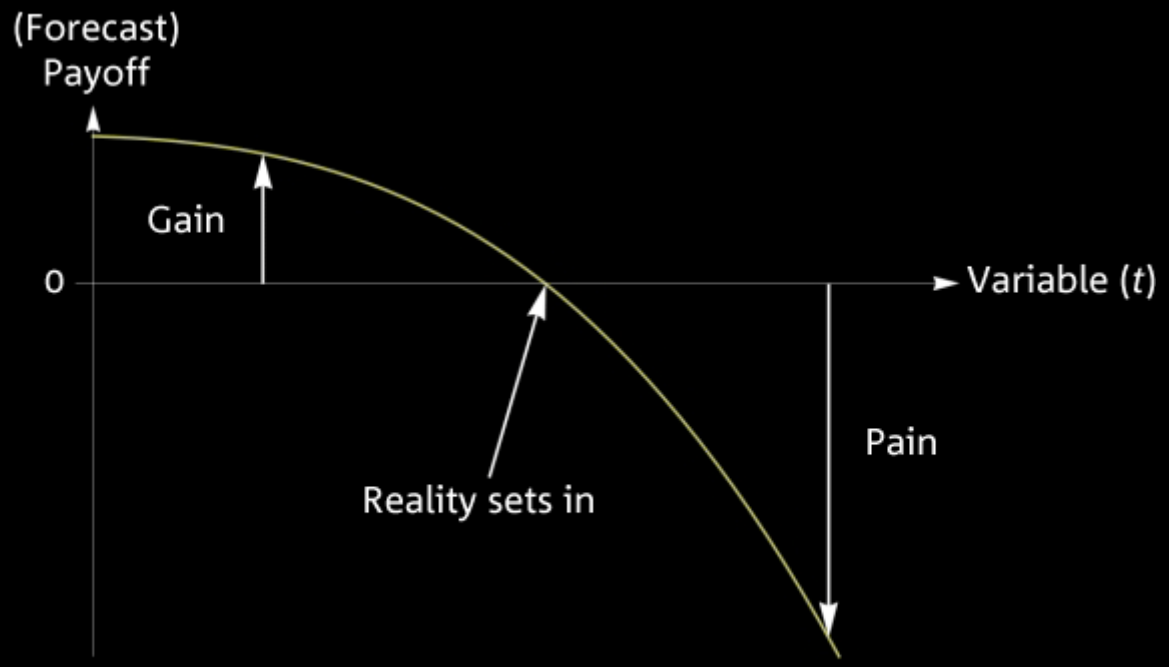
- 8 million business entities in Canada
- *28* million in the USA
- Most are not “tech”
- Most are too small
- But plenty are *big enough*

Risk, Fragility, and *Antifragility*

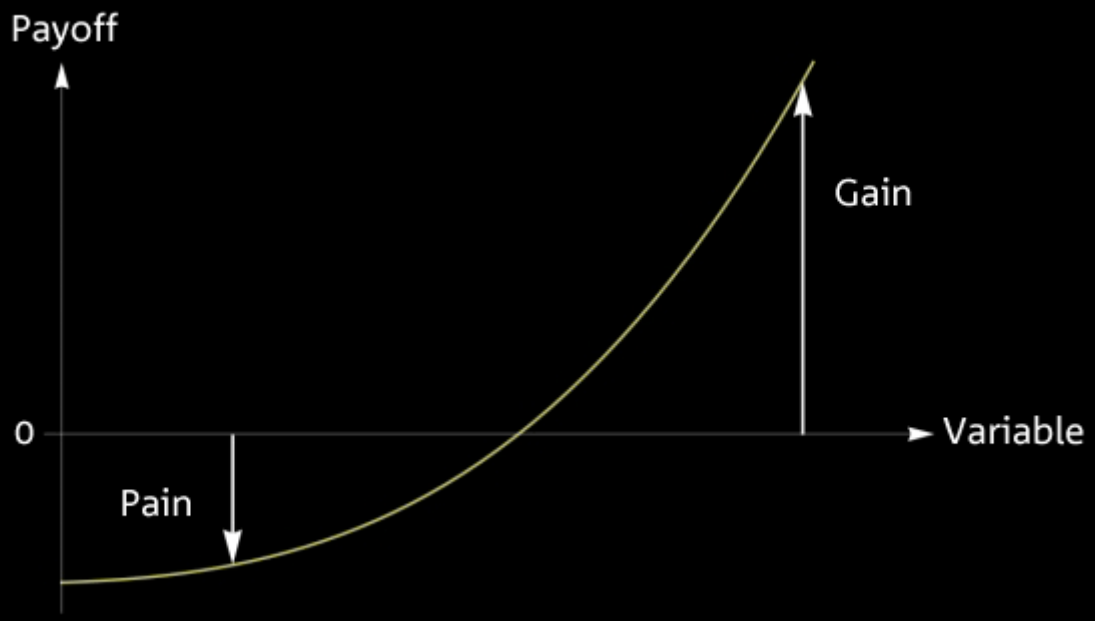
Risk as 3D Space



This process is *fragile*.



Antifragile *likes* surprises.



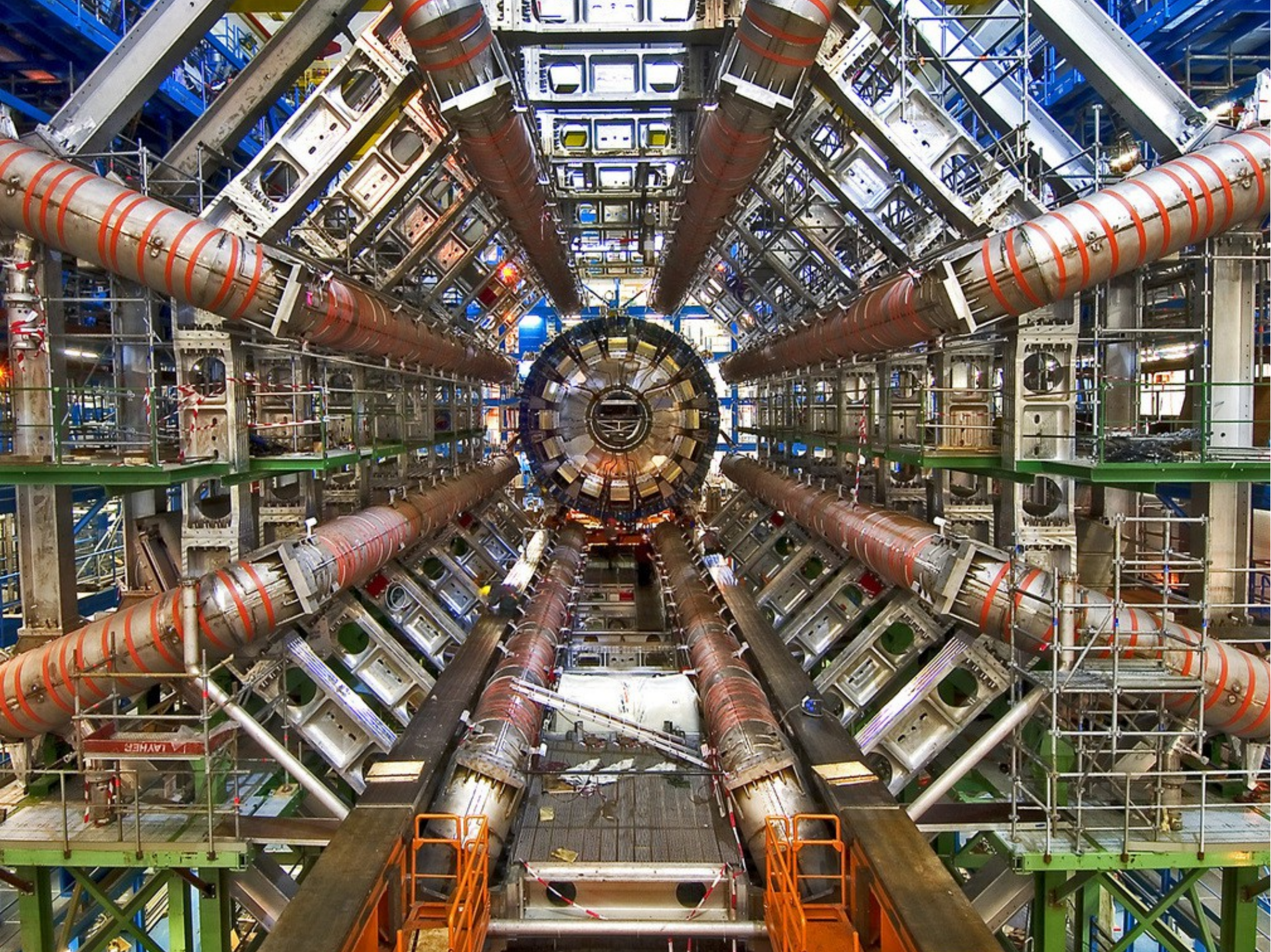

FAST
THE
ENGINEERING
PROJECT
TRIANGLE
CHEAP
GOOD
PICK TWO.

- Gather information
- Concentrate it into a set of design decisions
- Represent it…

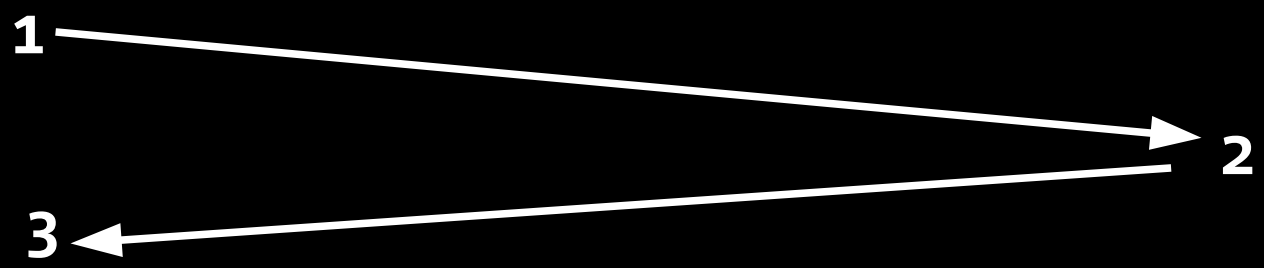
…so that it is:

- Accurate to the shared goals of the business (and its users)
- Comprehensible to implementers
- *Plausible* to *everybody*.

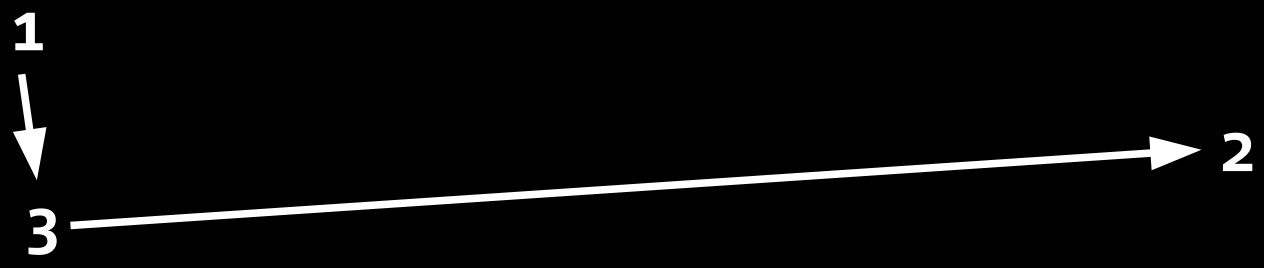
A Phenomenology of Information

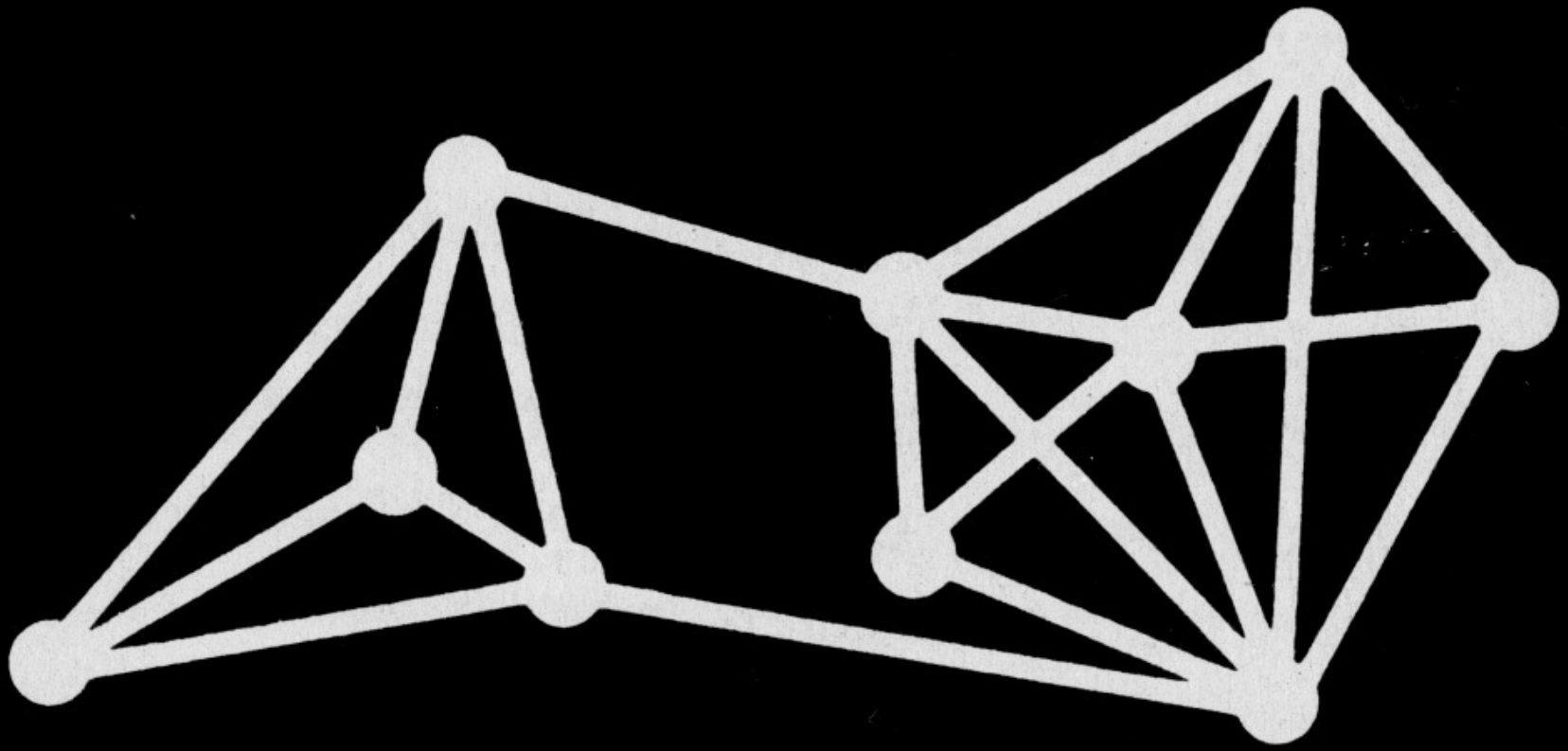


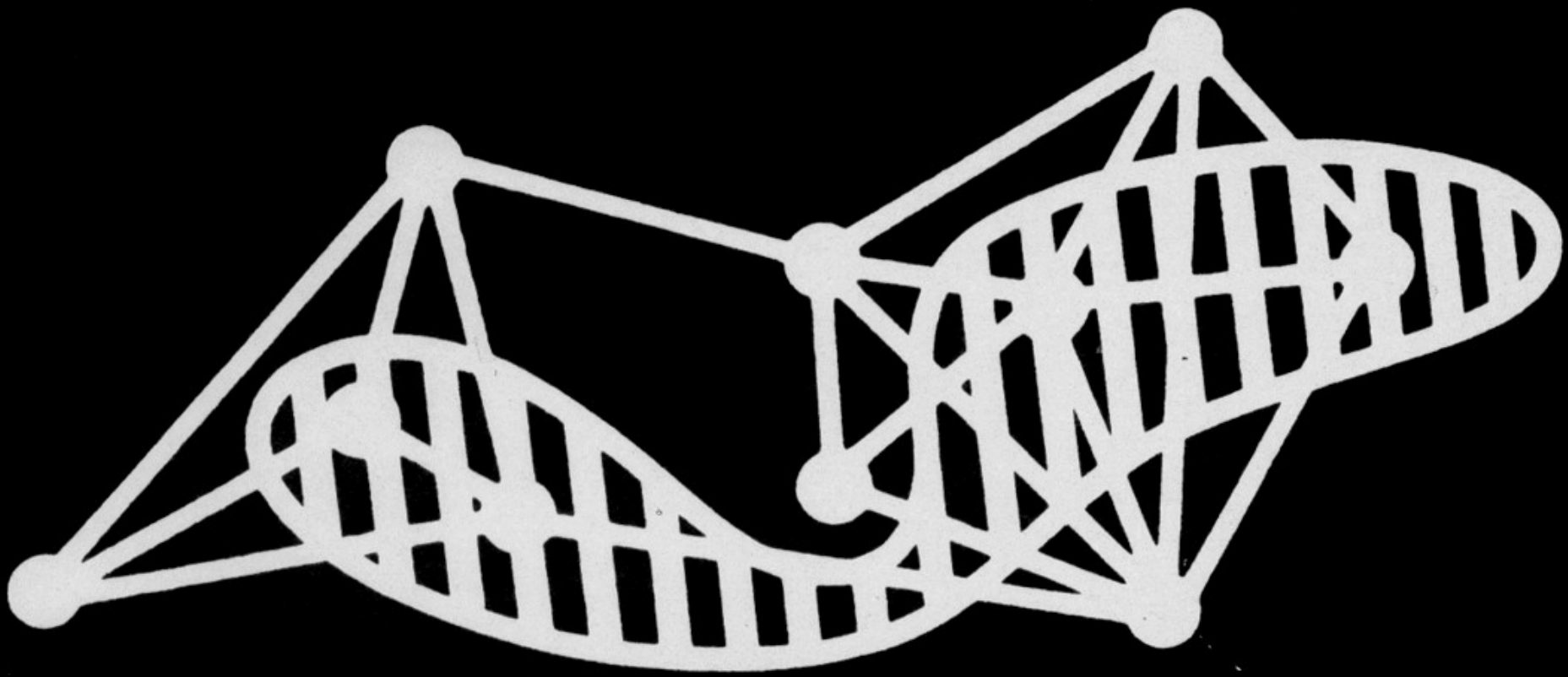
Information Seeking as Scavenger Hunt

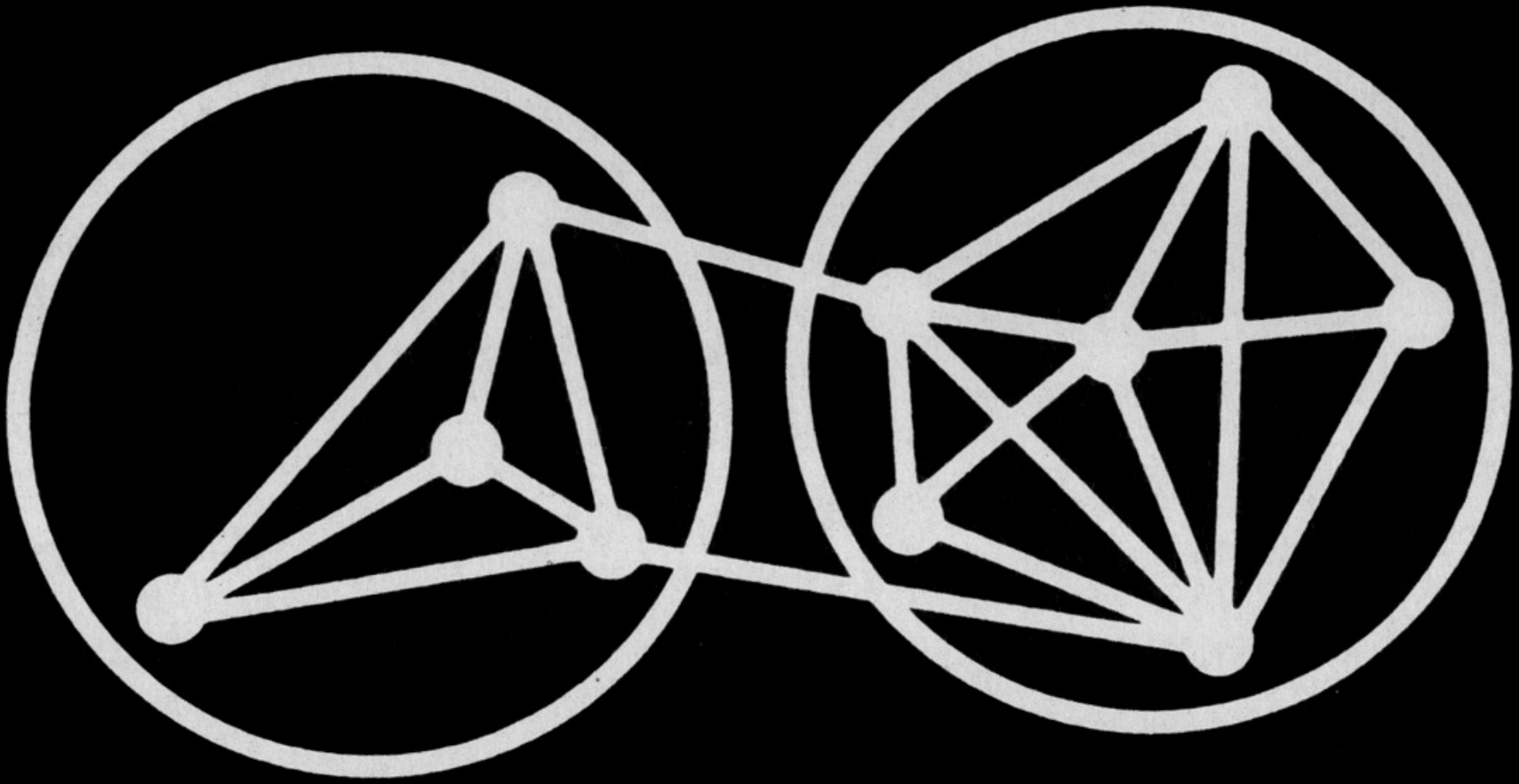


Information Seeking as Scavenger Hunt

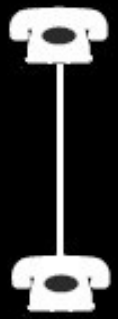


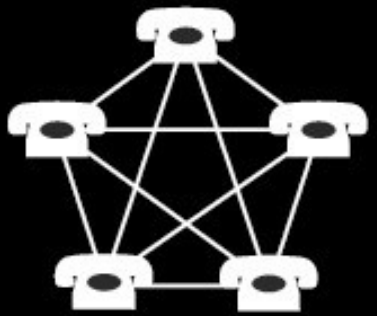


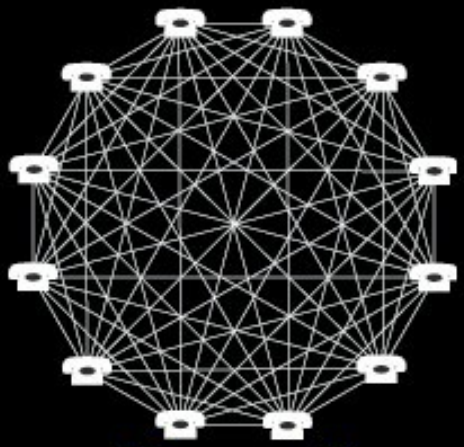




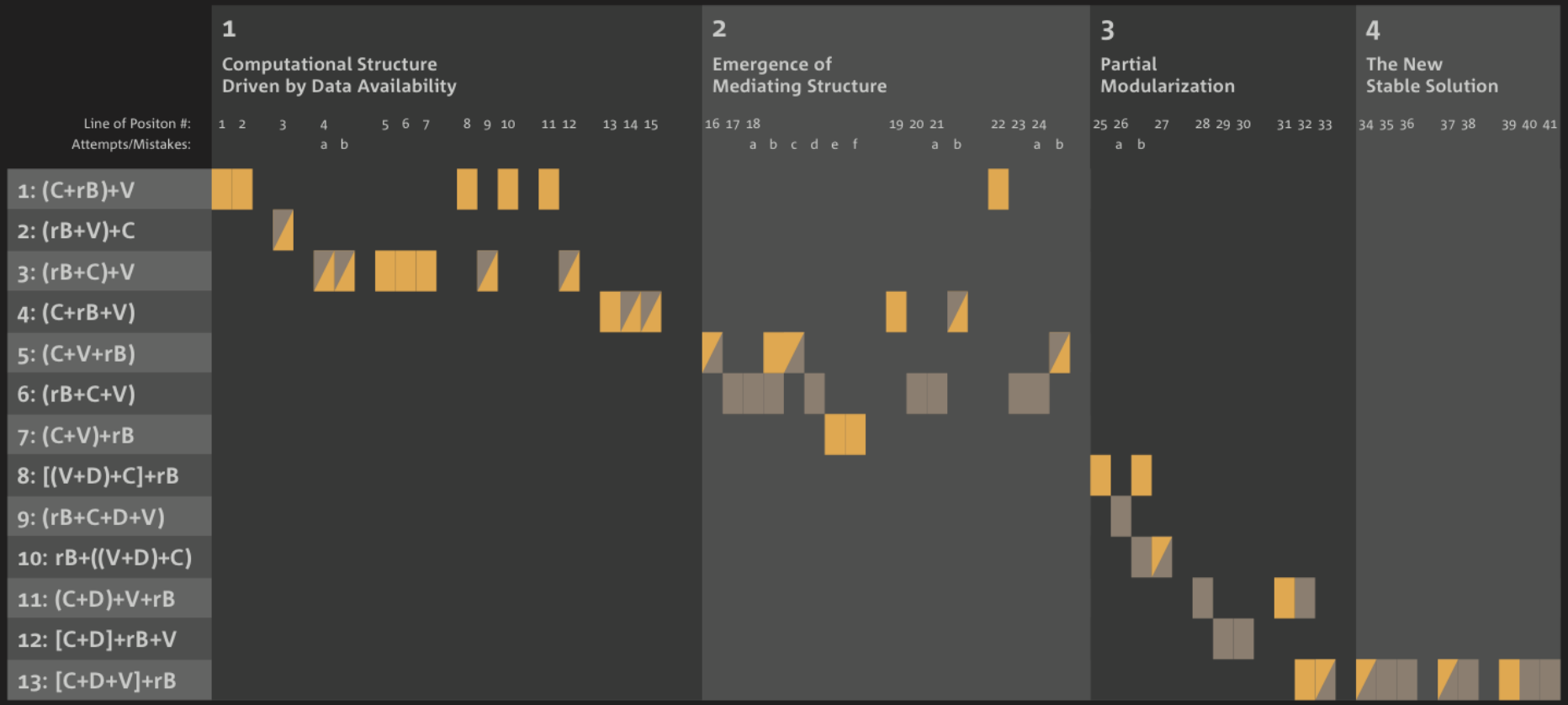
$(N^2-N)/2 =$







Dividing Labour Under Pressure: *Cognition in the Wild*, Chapter 8



The *USS Palau** has lost power and is careening out of control into San Diego harbour. The engine failure has knocked out the gyrocompass, the principal tool of the navigation team. The team must fix the position of the ship *every minute* to keep it out of danger, using three intersecting lines of position (indexed by the horizontal numbers above) from bearings taken from landmarks on the shore, and reconciled with the backup magnetic compass.

The problem these sailors have to solve is one of simple modulo arithmetic, adding and subtracting degrees of a circle (left column). The plotter (in charge) and the bearing recorder (receiving the readings) are under pressure to negotiate the best way to split the task of adding the numbers, *and in what order*, to fix sets of three lines of position onto the navigational chart. It takes them *32 tries*.

This riveting example shows just how hard it is to divide even a simple, well-defined task.

rB: Relative bearing
C: Magnetic compass heading
V: Variation (from true North)
D: Deviation (compass error)
(): Use of calculator
[]: Spoken as intermediate sum

Computation led by the plotter
Computation led by the bearing recorder
Started by plotter, finished by recorder
Started by recorder, finished by plotter

(*Fictional name ascribed to a real amphibious warfare vessel, basically a small aircraft carrier.)

Study by Edwin Hutchins, http://hci.ucsd.edu/hutchins/
Image prepared by Dorian Taylor, http://doriantaylor.com/

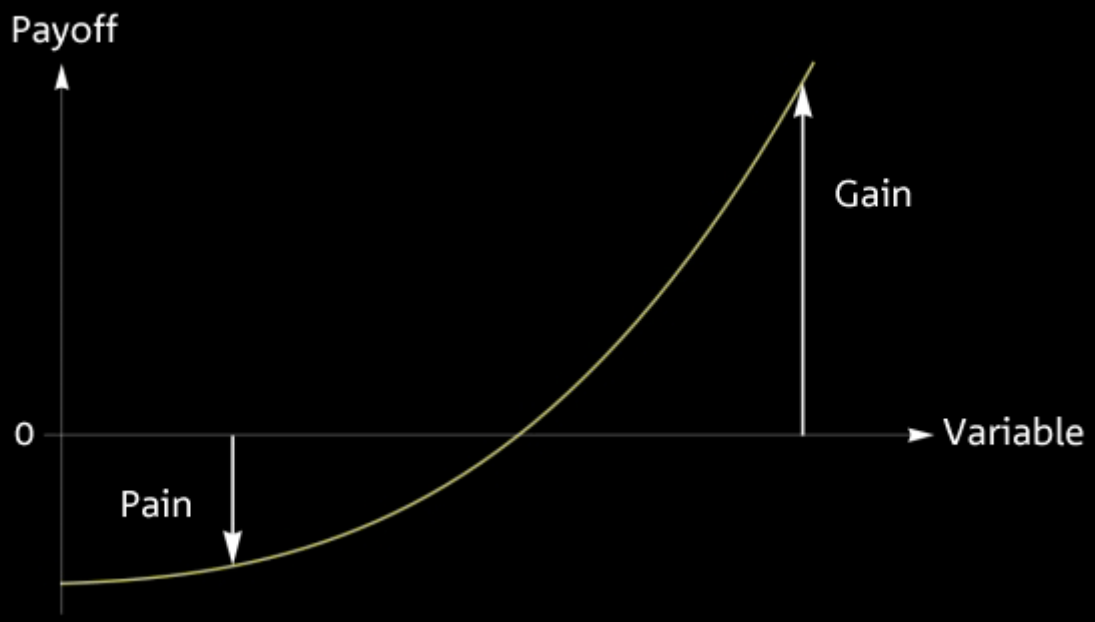
The User Goal as Basic Unit

A Grading System for User Goals

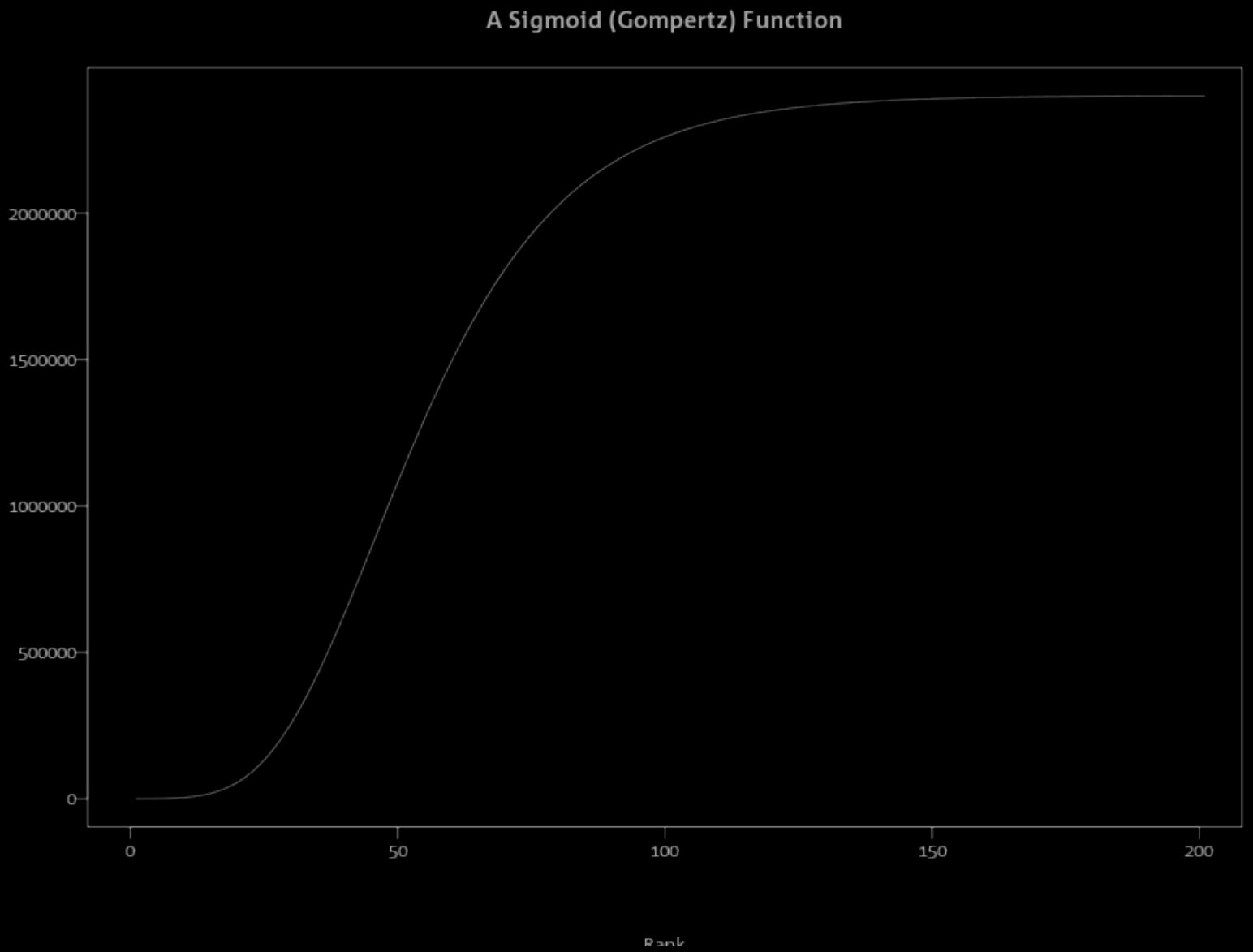
- **Polarity**
  (cost-saving or revenue-generating?)
- **Entailments**
  (what will you have to do to make it happen?)
- **Asset value of entailments**
  (what else can they be used for?)

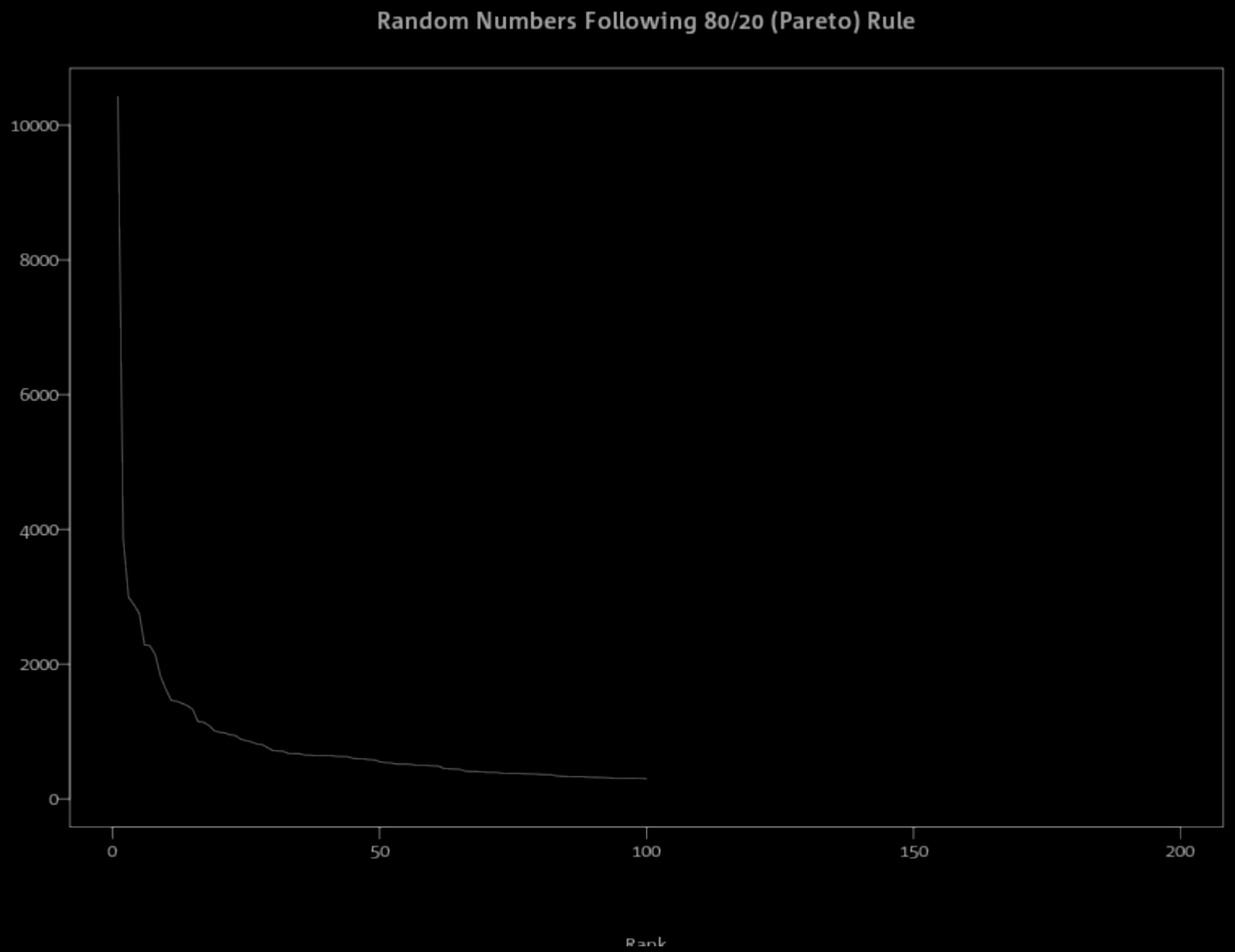

PREDICTABLE RESULTS
FAST
THE DESIGN PROJECT TETRAHEDRON
CHEAP
GOOD

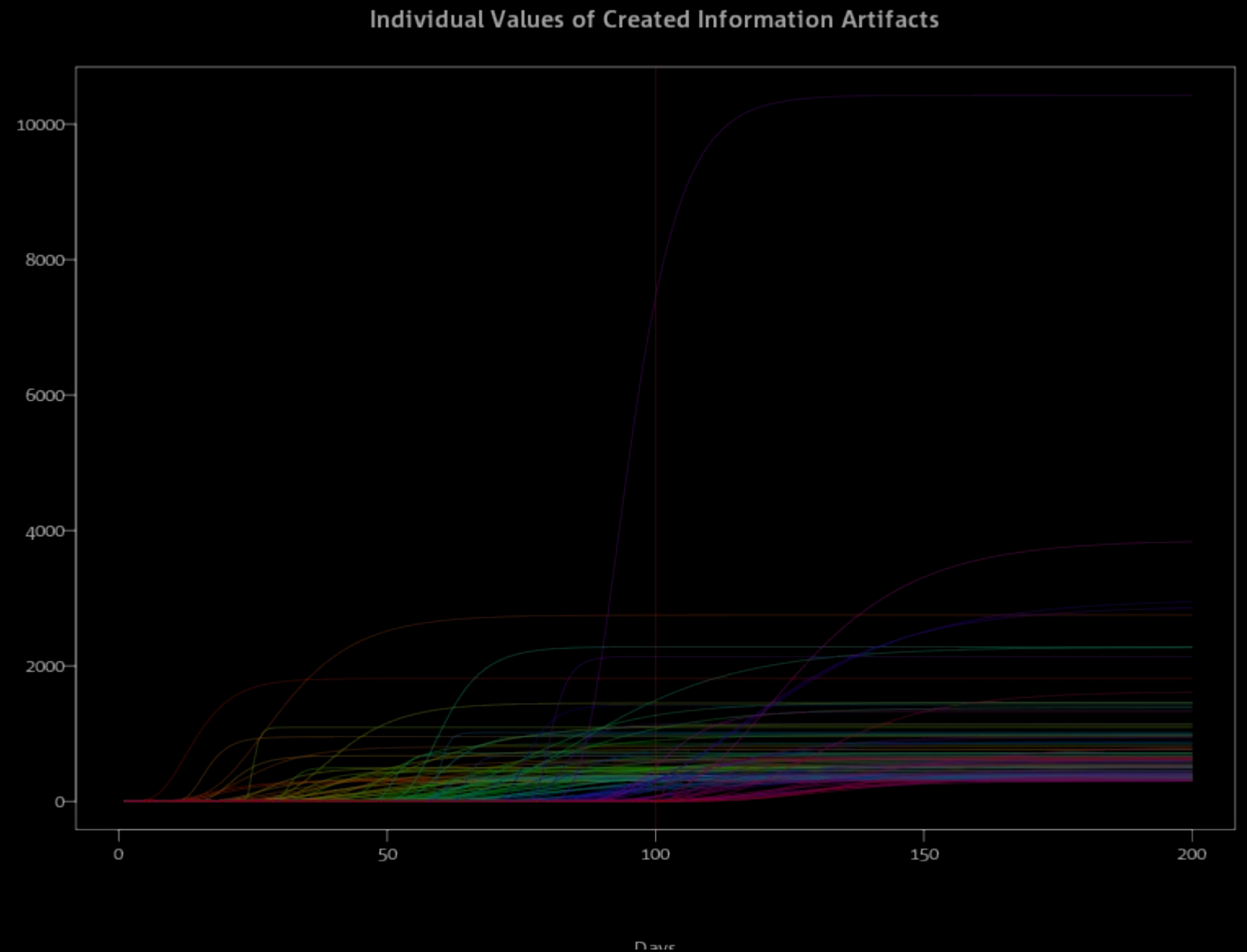
PICK THREE.

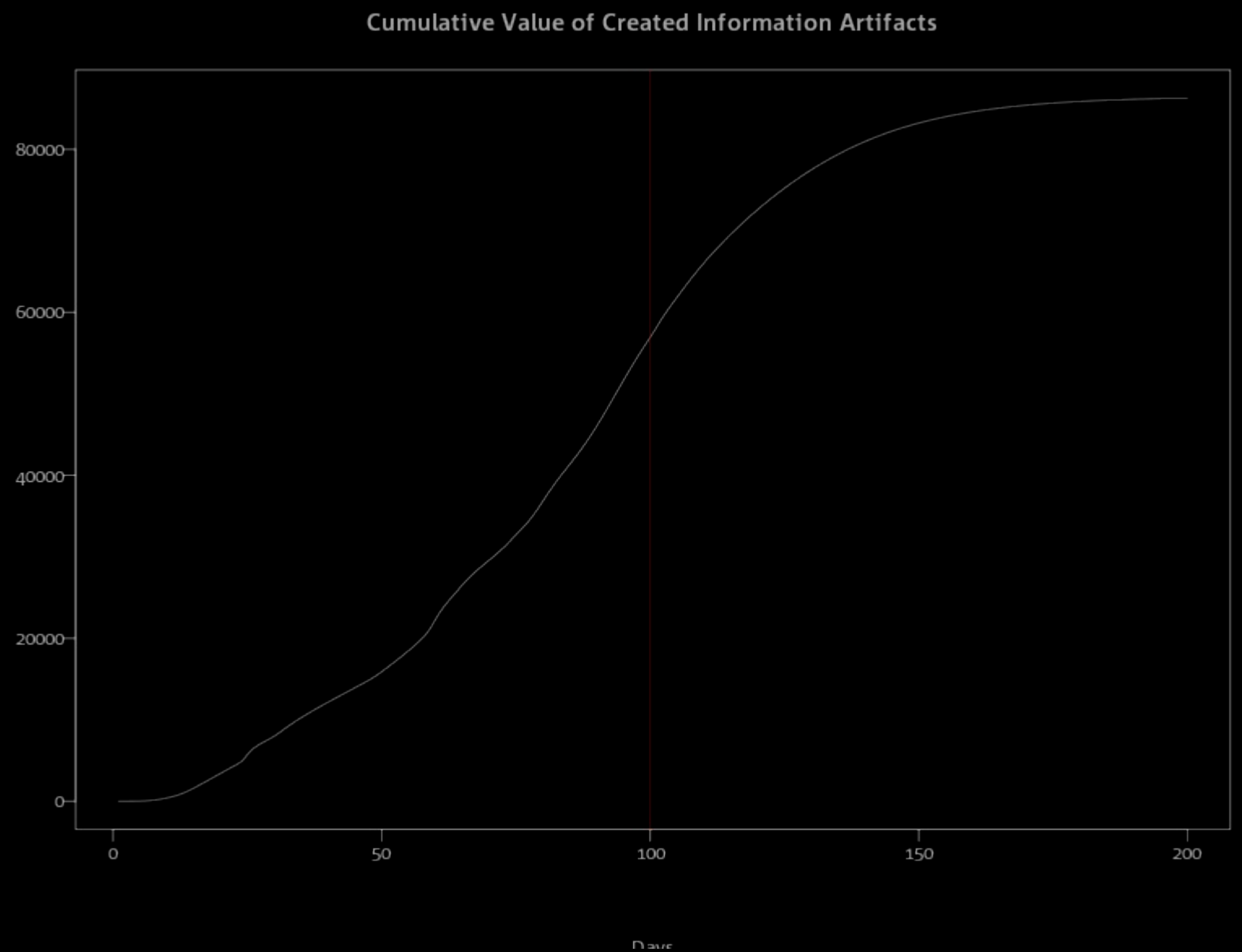

Payoff
Gain
0
Variable
Pain

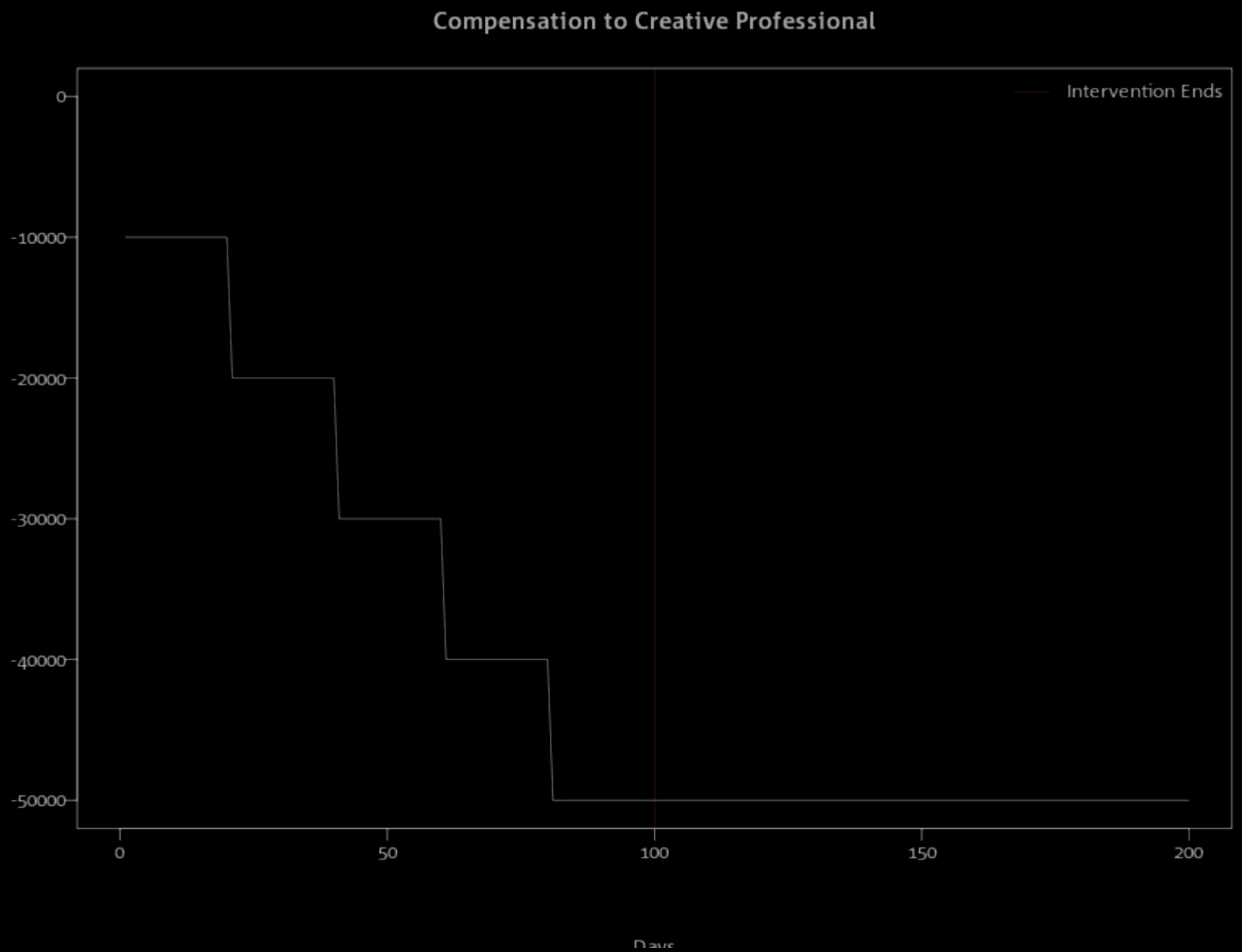
The ROI of a Solved Problem

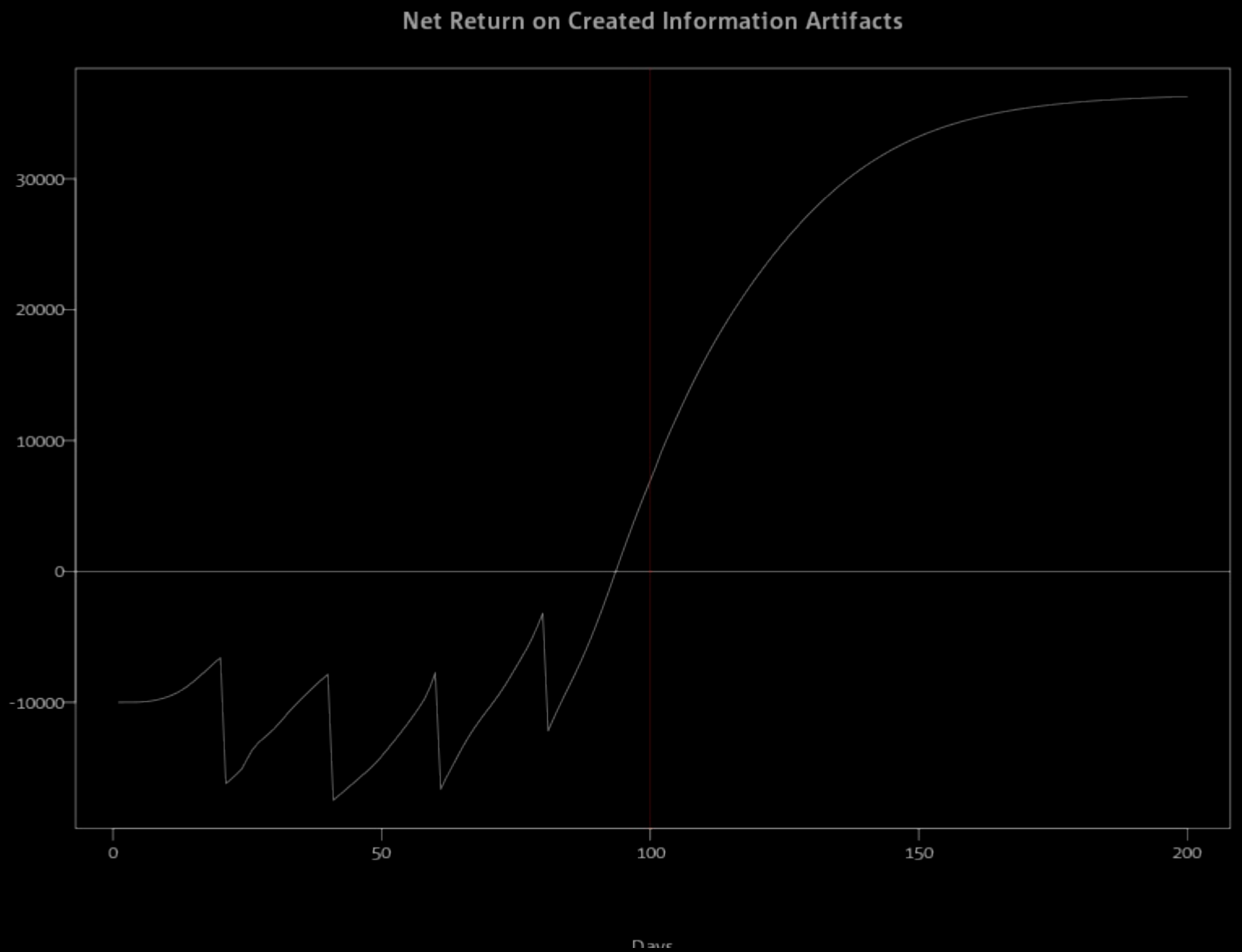

A Sigmoid (Gompertz) Function
2000000
1500000
1000000
500000
0
0
50
100
150
200
Rank


Random Numbers Following 80/20 (Pareto) Rule
10000
8000
6000
4000
2000
0
0
50
100
150
200
Rank


Individual Values of Created Information Artifacts
10000
8000
6000
4000
2000
0
0
50
100
150
200
Days

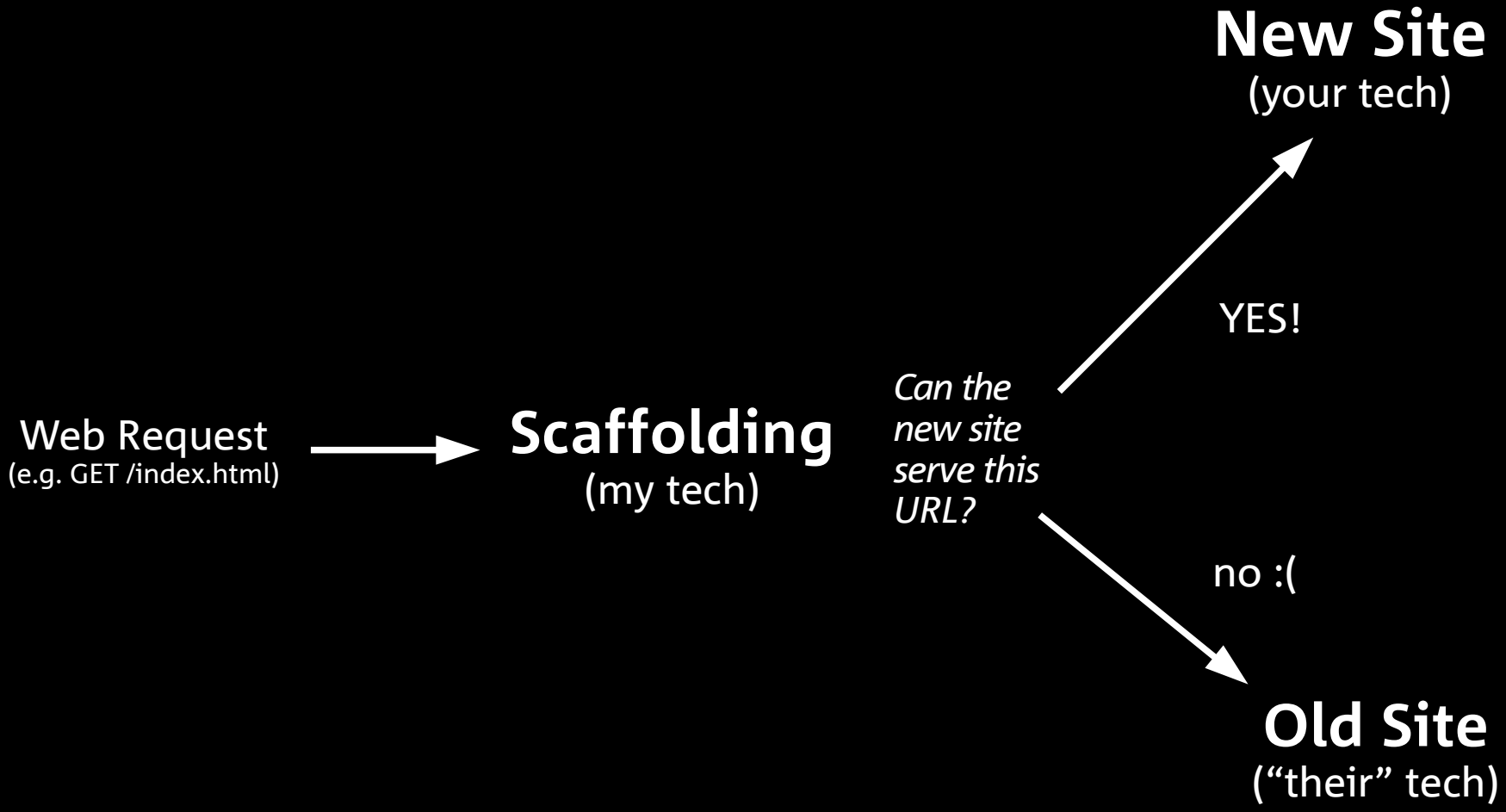

Cumulative Value of Created Information Artifacts
80000
60000
40000
20000
0
0
50
100
150
200
Days


Compensation to Creative Professional
Intervention Ends
0
-10000
-20000
-30000
-40000
-50000
0
50
100
150
200
Days


Net Return on Created Information Artifacts
30000
20000
10000
0
-10000
0
50
100
150
200
Days

Scaffolding

How the Scaffolding Works:



- Requested URLs are tested on the fly
- Scaffolding runs *beneath* the application layer, meaning you can use *any* tech stack

Incremental development is fundamentally a b*usiness problem*

To solve it, we need to understand the reality of our medium: *information*

The *user goal* is an appropriate unit for *business* as *well* as process

Sell UX like it's an asset in its own right

Our tools should *reflect* how we *wan*t to work, not the other way around.

Thank you!

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