

Data, Information, and the Concern for Knowledge

data are the lowest level of abstraction from which information and knowledge are derived.

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one caveat: this way of framing the universe is an imagined reality / social construct. more later...

Measurable Things

28° Celsius

500 GB

42 MPG

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Words, Actions

Going to the market

Writing an essay

Attending class

Measurable Things

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500 GB

42 MPG

Words, Actions

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Terms, Functions

screen

keyboard

trackpad

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28° Celsius

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Terms, Functions

screen

keyboard

trackpad

Words, Actions

Going to the market

Writing an essay

Attending class

Ideas, Approximations

$f=ma$

a foreign policy

Qatar 2030

Data lacks meaning without fact.

Individual words are meaningless,
but put them together and you get fact.

tall

sun

Data lacks meaning without fact.

Individual words are meaningless,
but put them together and you get fact.

he is tall.

the sun is out.

Data lacks meaning without fact.

Individual words are meaningless,
but put them together and you get fact.

he is tall.

the sun is out.

Data + Fact = Information

Anybody can make claims of fact.

Go to the data in order to verify.

Data + Fact = Information

Data + Fact



= Information

entropy and
randomness.
all that is given.

Data

depends on
freedom of choice

Fact



Information

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all that is given.

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Fact



Information

Whether

What

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Data

Fact

Connections

Principles



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Information

Experience

Understanding

Whether

What

How

Why

FIRST ORDER

SECOND ORDER

THIRD ORDER

FOURTH ORDER

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How

Why

FIRST ORDER
COMMUNICATION

SECOND ORDER
CONSTRUCTION

THIRD ORDER
INTERACTION

FOURTH ORDER
INTEGRATION

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FIRST ORDER
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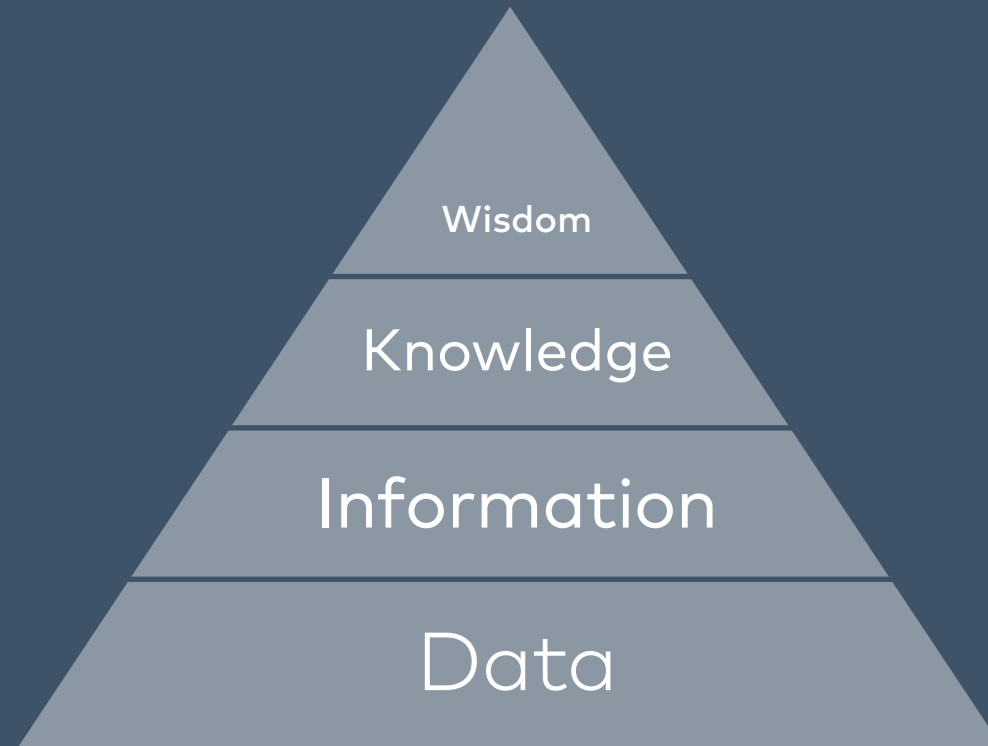
Choosing
Analyzing
Giving Order
Organizing
Scoping
Interpretation
Argument

Sensemaking
Shaping, Form Giving
Adding Structure
Prototyping
Visualizing
Bringing to Life
Interface and Surface

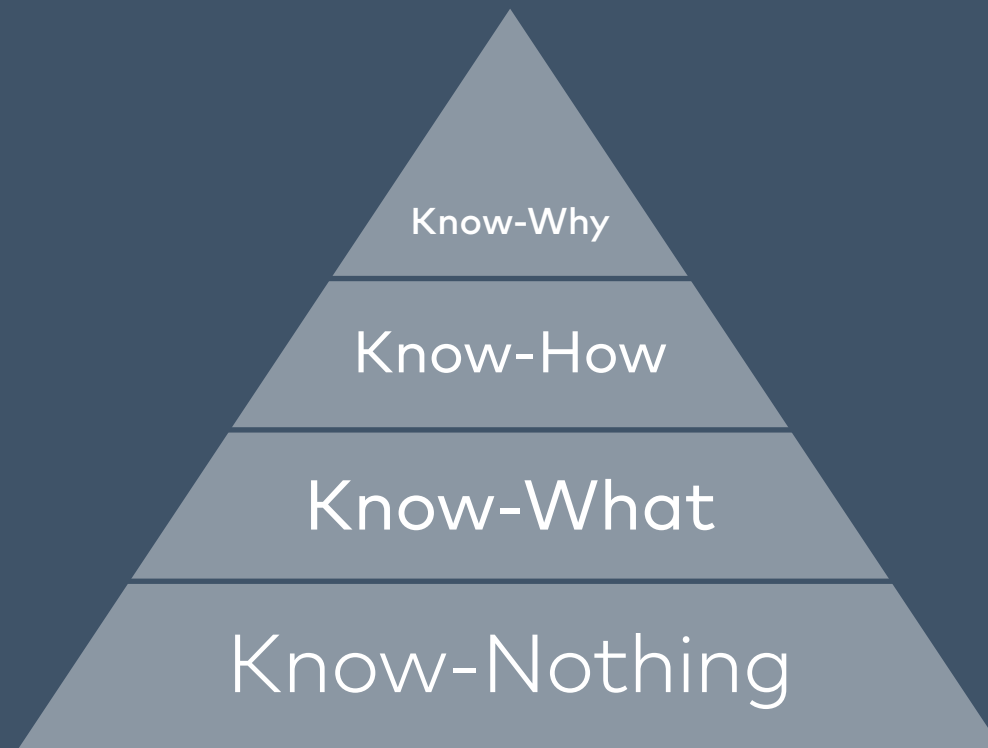
Creating Pathways
Making Things Interactive
Adding and Shifting Perspectives
Drawing Multifaceted Relationships
Showing through Experience
Tapping Emotion
Medium as Message

Integrity, Honesty
Relevance and Purpose
Interconnectedness
Understanding Ecosystems
Underlying Values
Democratic Ideals
Distributive Justice

Another Model



Another Model

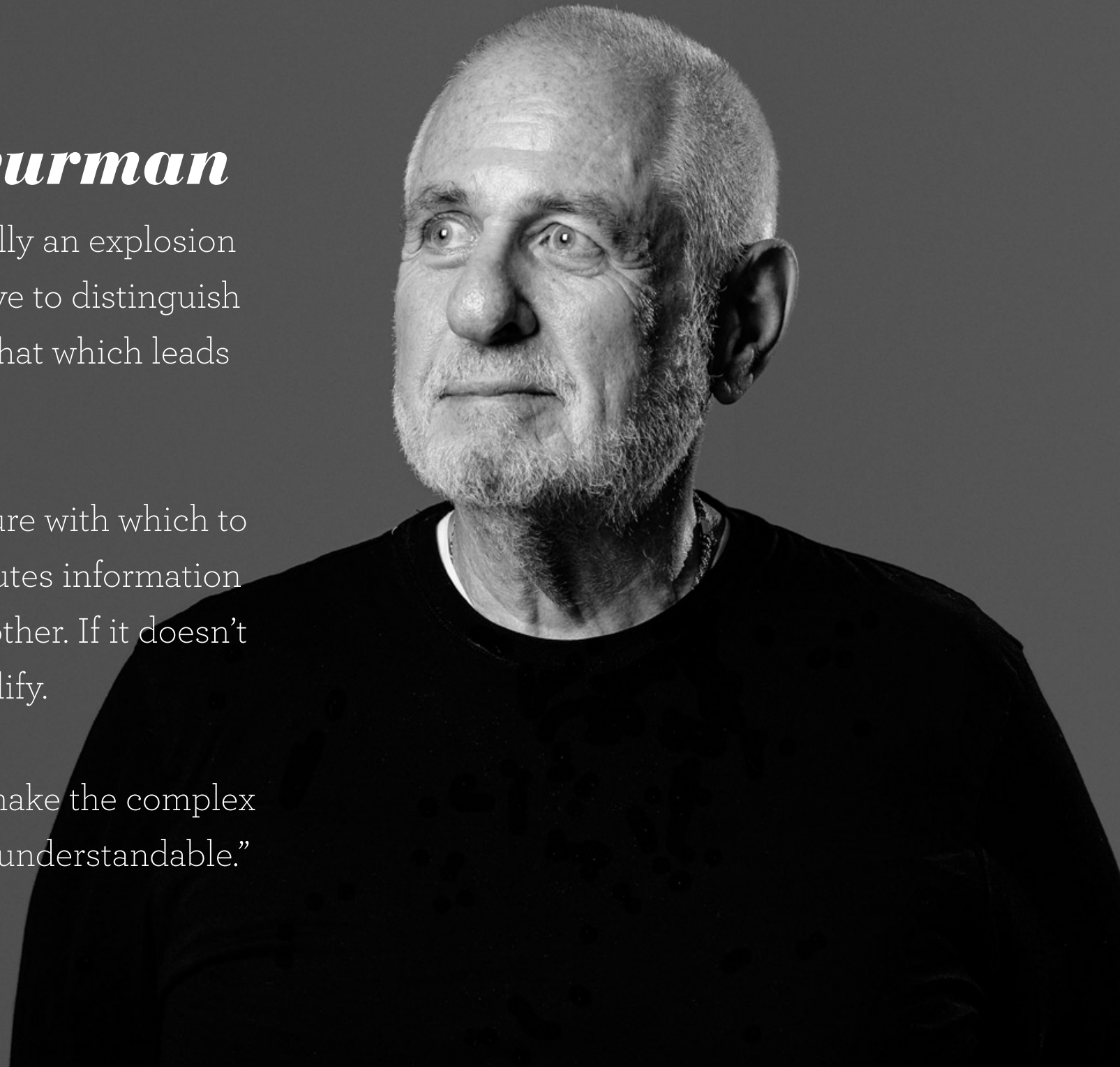


richard saul wurman

“...the great Information Age is really an explosion of non-information; it is imperative to distinguish between the two; information is that which leads to understanding.

“Everyone needs a personal measure with which to define information. What constitutes information to one person may be data to another. If it doesn't make sense to you, it doesn't qualify.

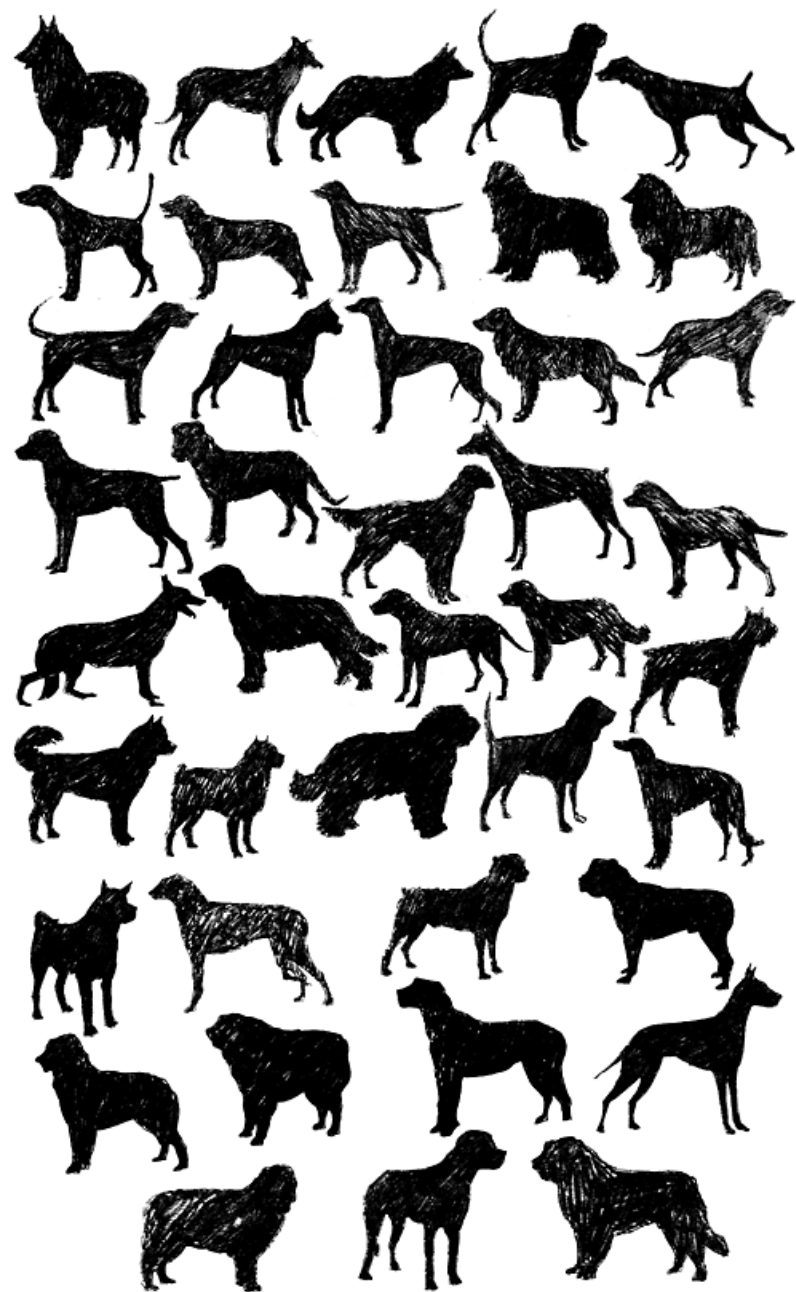
“Effective information architects make the complex clear; they make the information understandable.”



five ways
to organize data

Richard Saul Wurman

-
- L** Location
 - A** Alphabetic
 - T** Time
 - C** Category
 - H** Hierarchy



Category Sorted by Breed



Location Sorted by Country of Origin



Alphabetical Sorted by Name



Time Sorted by Age



Hierarchy Sorted by Size

Organization of data into categories, catalogues, calendars, dictionaries, forms, and tables is not an inherent way of thinking for humans. In the brain, all data is freely-associated.

Say, for instance, i go to the bank to make a deposit. i walk up to the front of the building and spot the ATM. as i take out my wallet, i remember going to the bank when i was ten years old, and then i think about my dad, and how we would walk to that old cobblestone bank in Vineyard Haven to the bank's shaded side entrance, which reminds me of the shop next door to the bank - the one in the alleyway - where the old man named Travis Tuck made sculptures out of copper, and then i remember that the old man died recently (i read about it in the paper not too long ago), and i think about the paper, the Vineyard Gazette, a huge broadsheet that came twice a week, and how it would yellow in the sun on our back porch when my mom would leave it out, how her glass of ginger ale would sweat and wrinkle the paper in one spot. the bobwhites that would chirp through the afternoons and the breeze blew over the meadow and that dry meadow grass that crunched under my feet. in the summertime, my mom never wore shoes anywhere - she drove her car barefoot, shopped at the A&P barefoot and even barefoot we'd play basketball in the

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When I make my bank deposit, I certainly hope that the bank's system of record-keeping isn't the same format as my brain's.

In a bureaucracy, things must be kept apart. We want the bankers to think in the same format and ordering system as their records and filing cabinets.

And that's why script was invented in Mesopotamia over 4,000 years ago: to keep data records.

"The most important impact of script on human history is precisely this: it has gradually changed the way humans think and view the world. Free association and holistic thought have given way to compartmentalisation and bureaucracy."