

“...Wonder defined [as it was up to the end of the eighteenth century] as a form of learning – an intermediate, highly particular state akin to a sort of suspension of the mind between ignorance and enlightenment that marks the end of unknowing and the beginning of knowing.”

Adalgisa Lugli, “Inquiry as Collection”



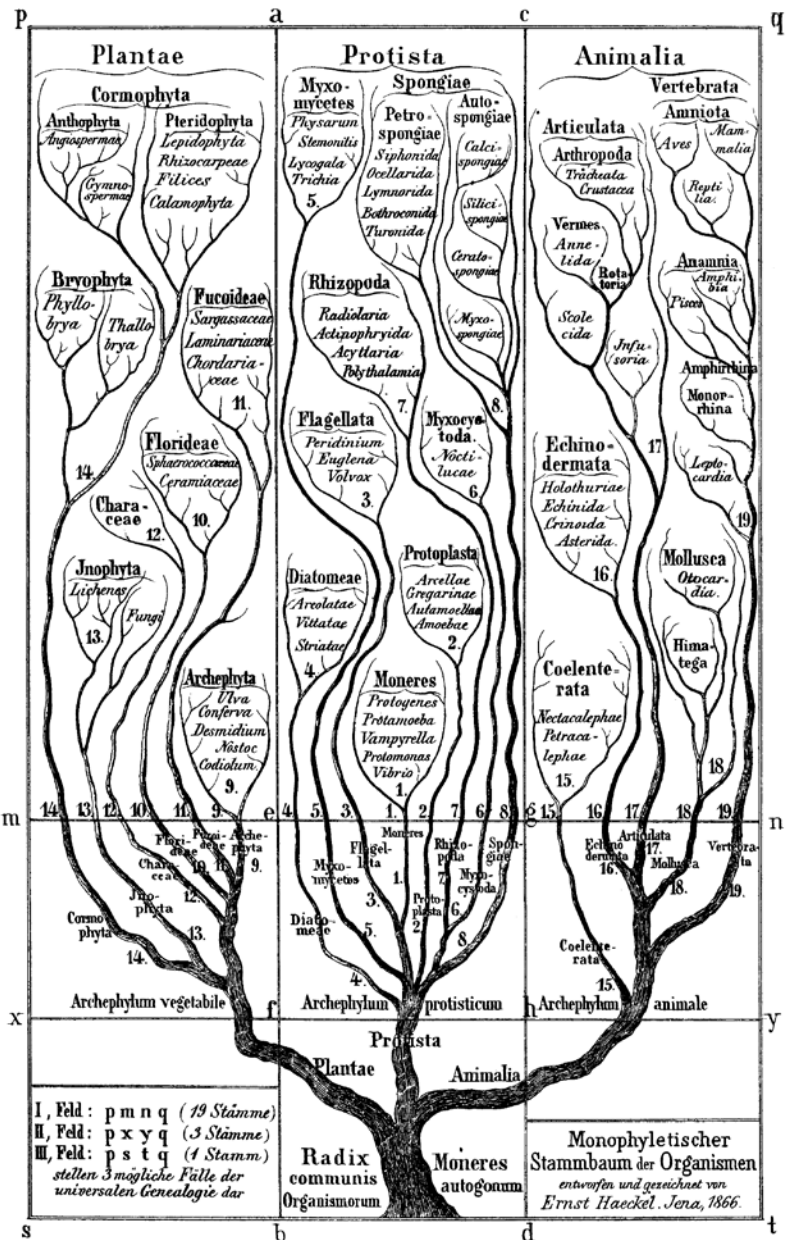
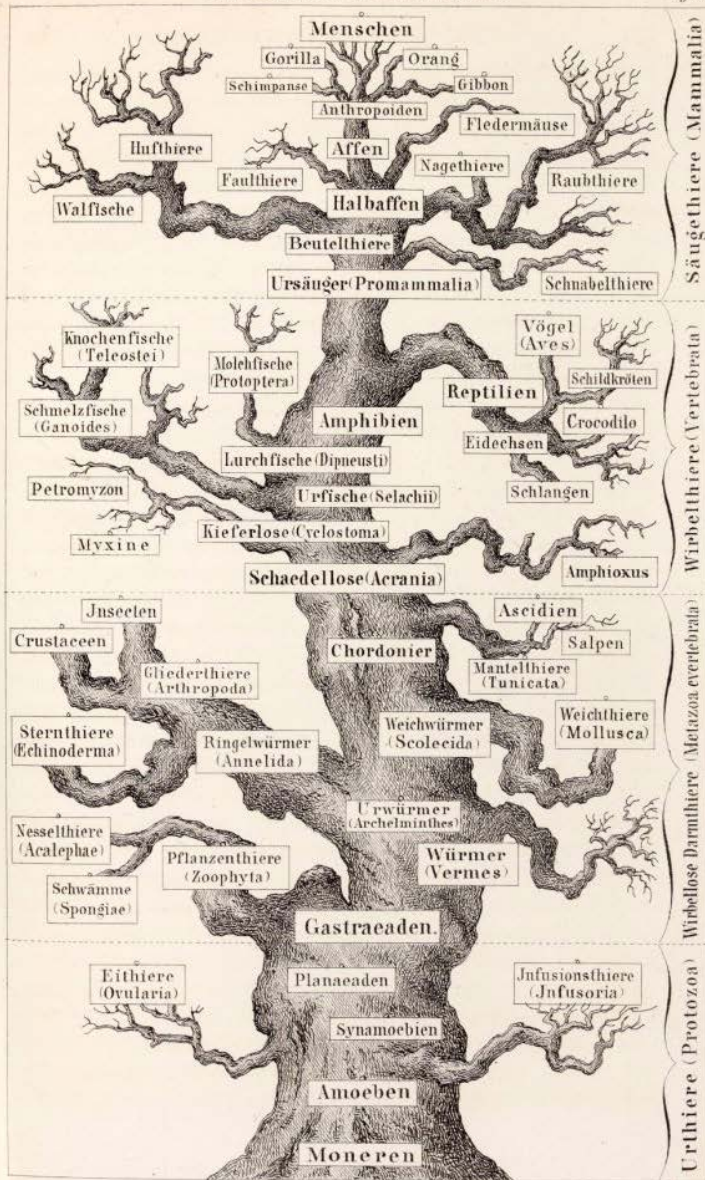


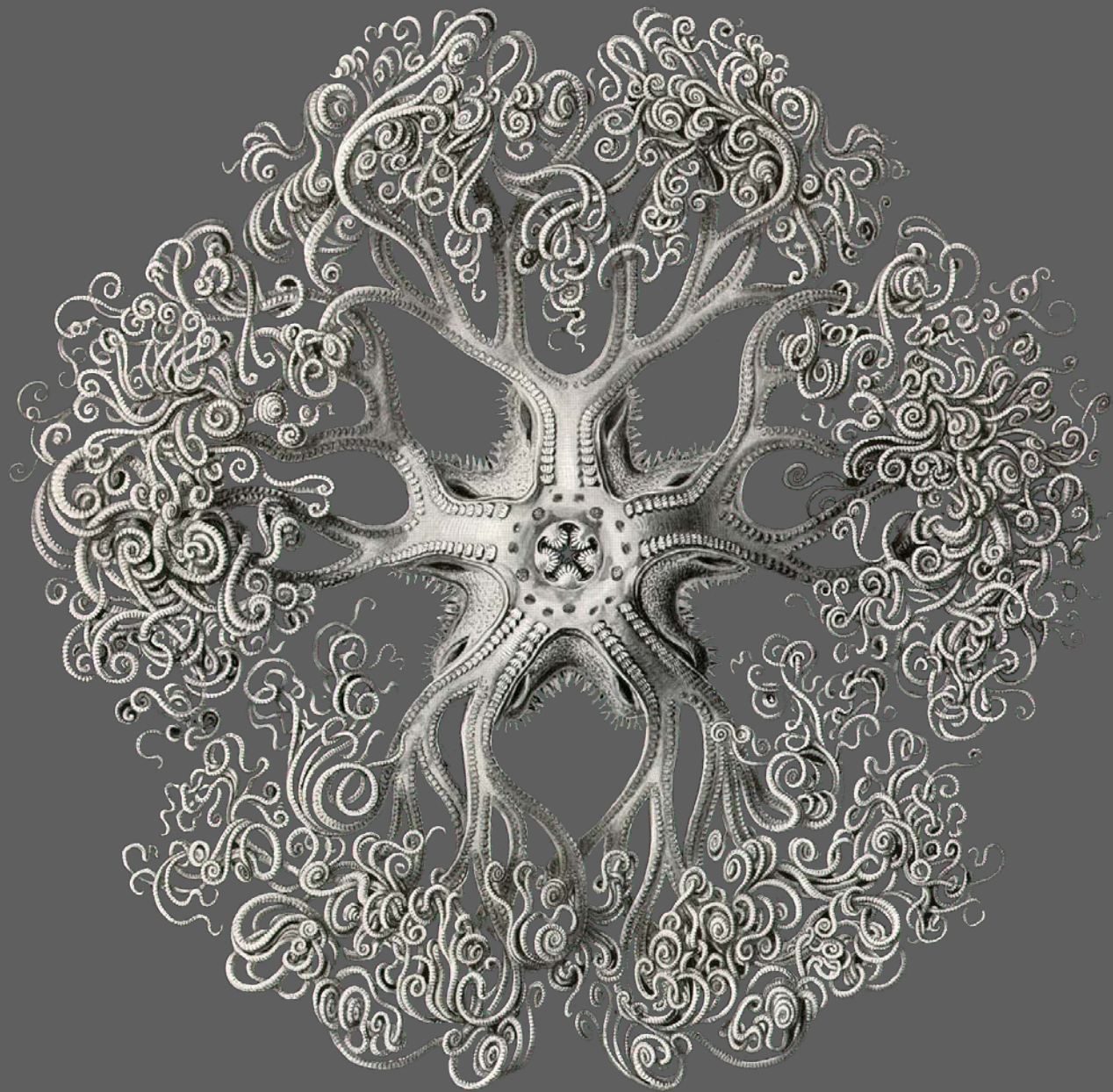




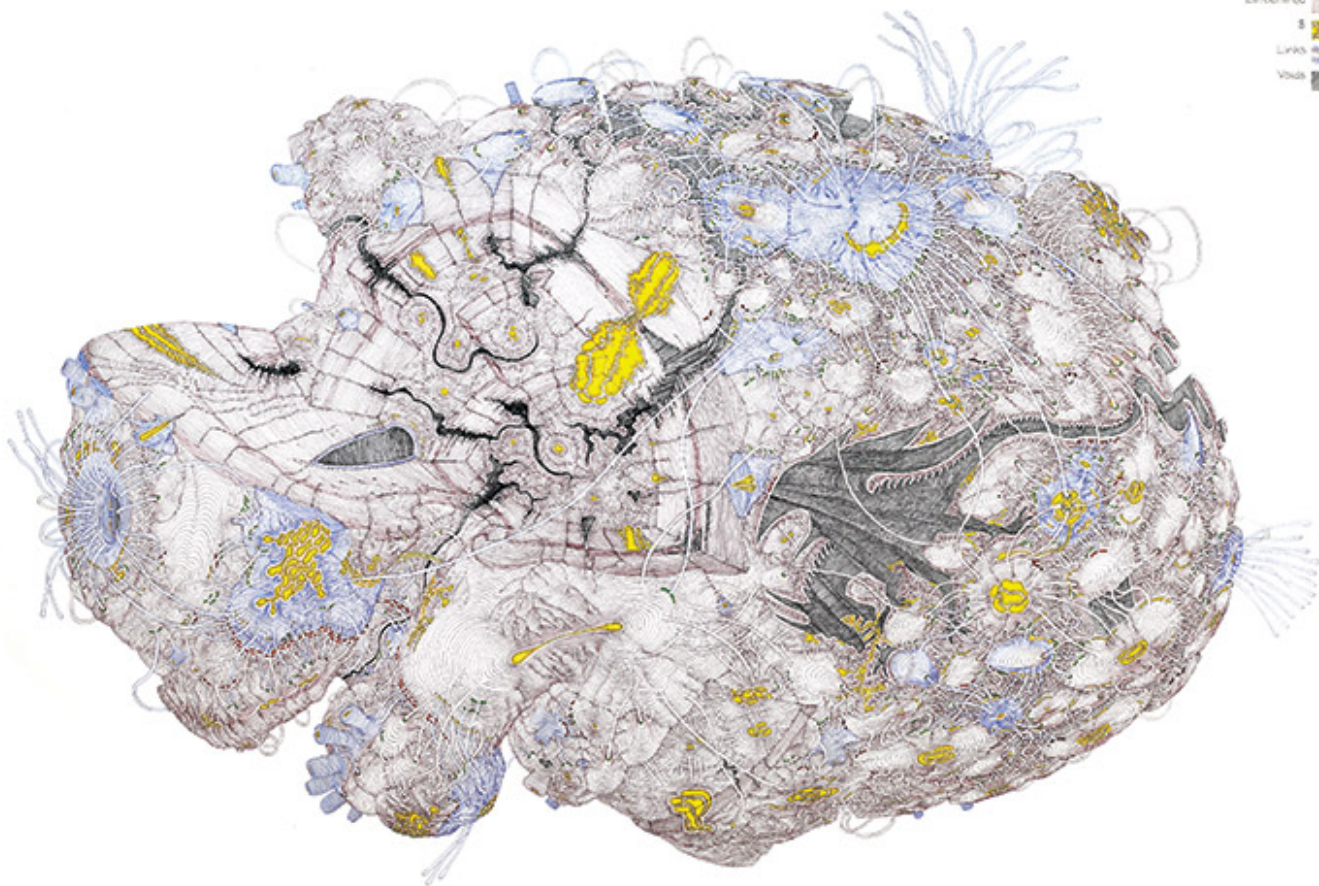
Stammbaum des Menschen.

Taf. XII.





HYPOTHETICAL MODEL of the EVOLUTION and STRUCTURE of SCIENCE



One of Many Possible Interpretations

Daniel Zeller 2007

Model of Surface Detail

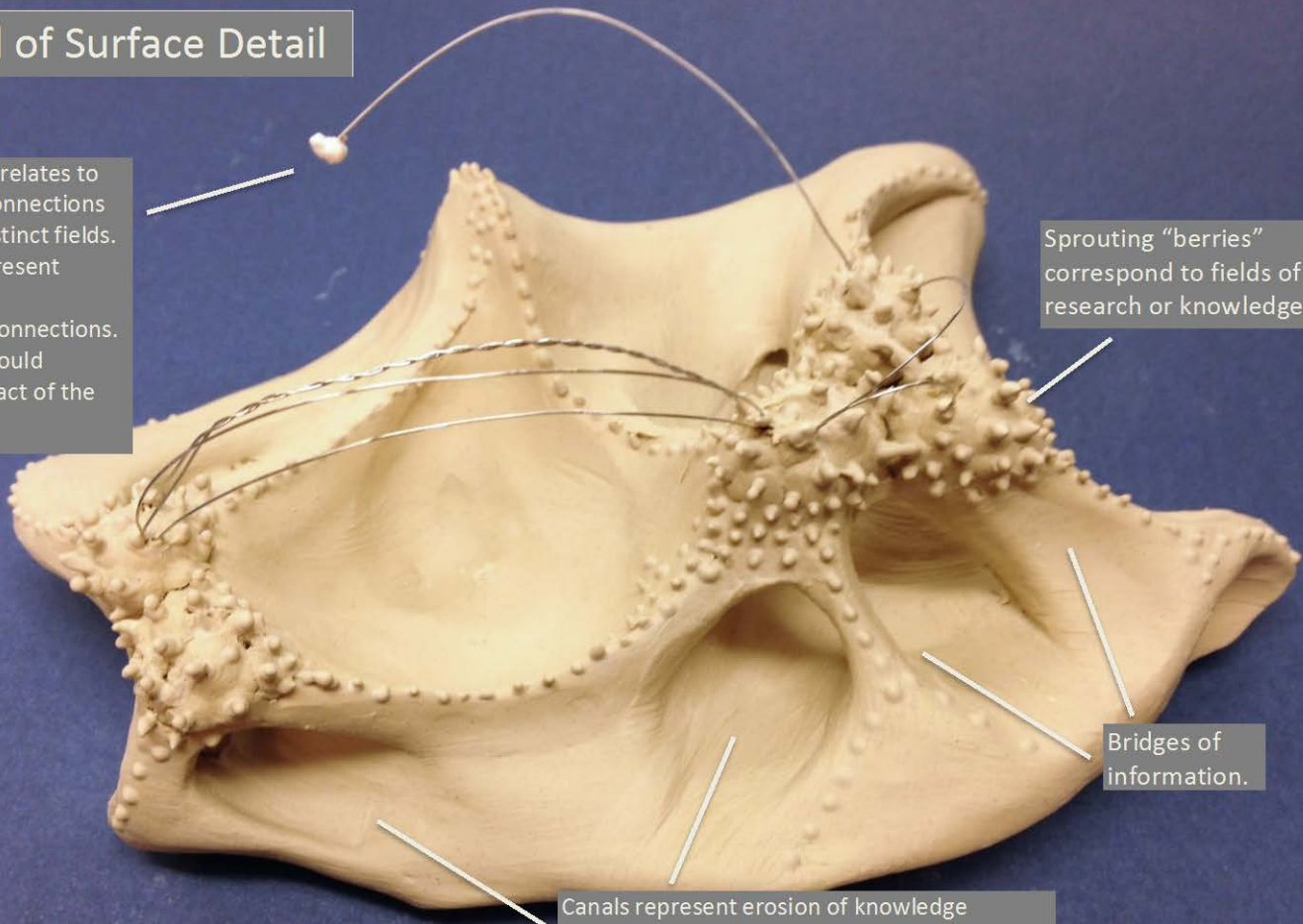
Suspended wire relates to the search for connections between two distinct fields. Wire arches represent established collaborations/connections. Wire thickness could correlate to impact of the connection.

Sprouting "berries" correspond to fields of research or knowledge.

Bridges of information.

Canals represent erosion of knowledge through folklore, legend, or false information on the internet or media. These are much larger in comparison to undeniable truths (represented by bridges.)

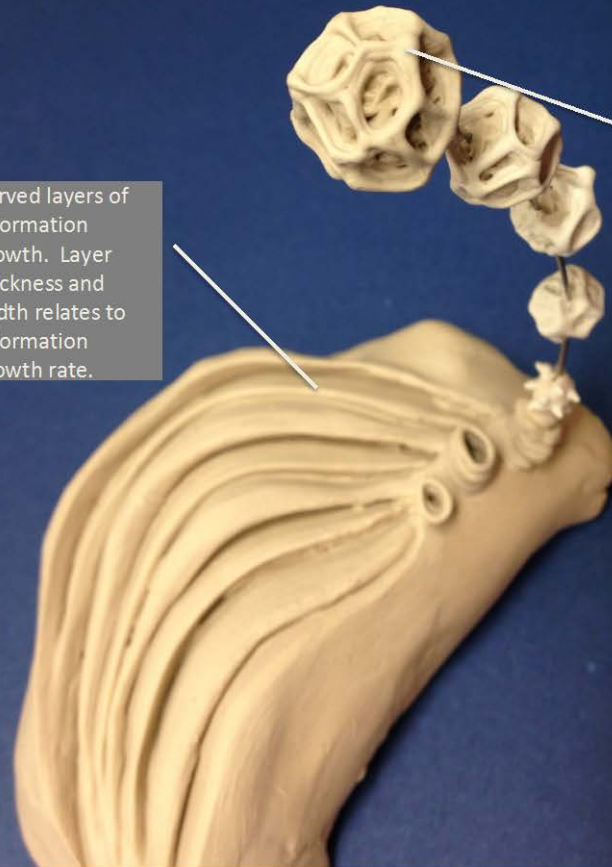
Model by Carrie Longley



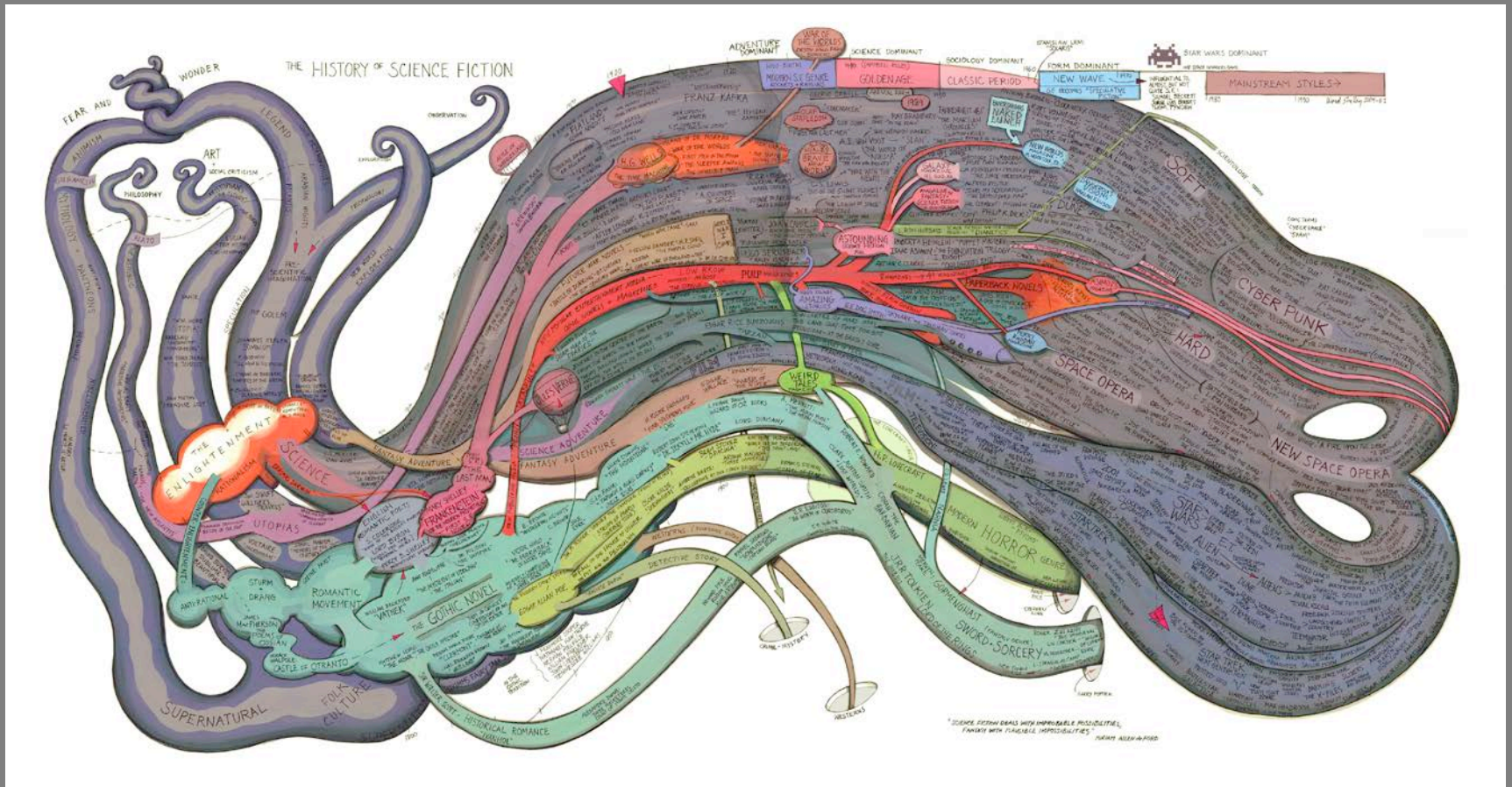
Model of Surface Detail
Version 2

Carved layers of
information
growth. Layer
thickness and
width relates to
information
growth rate.

Small layers of
suspended
information growth.



Artist: Ward Shelley
The History of Science Fiction
2011



Prototype 3 (in progress)

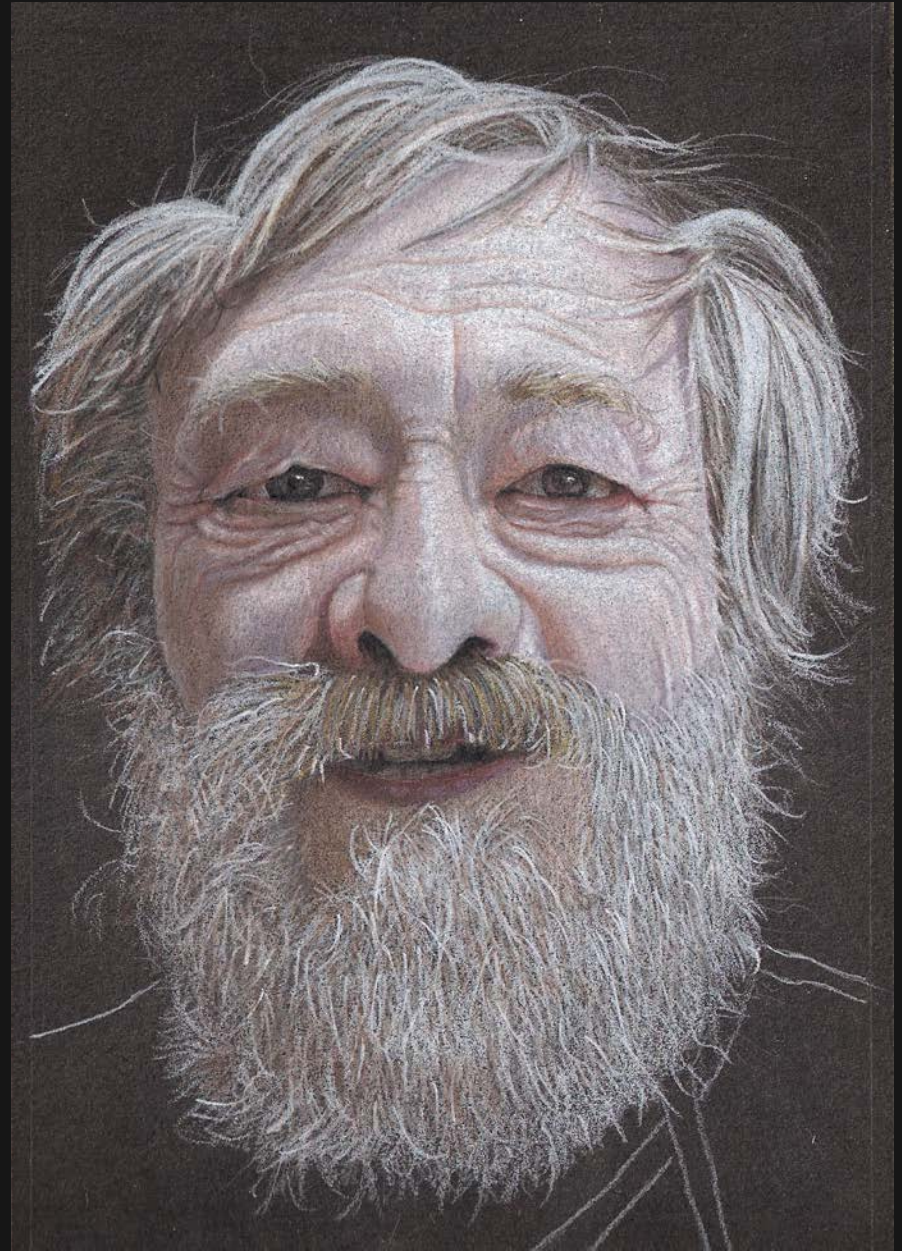


Prototype 3





Kevin Longley "Self Portrait"



"John Moore"

SMALL SPHERE
RELATES TO BEGINNING
OF KNOWING.

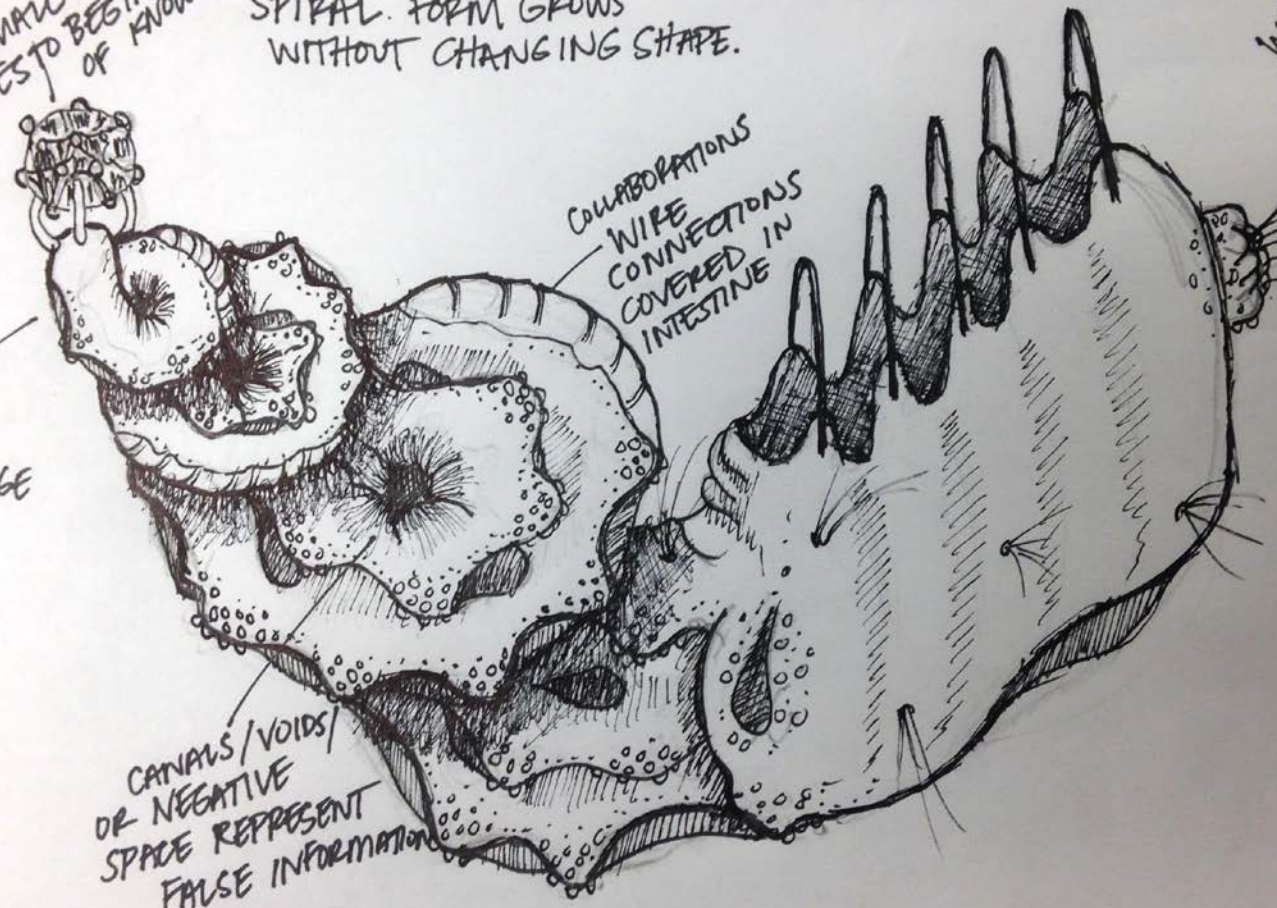
- OVERALL FORM IS A
GROWING/SWELLING
SPIRAL. FORM GROWS
WITHOUT CHANGING SHAPE.

SPIRAL
GROWS AS
KNOWLEDGE
BUILDS.

COLLABORATIONS
WIPE CONNECTIONS
COVERED IN
INTESTINE

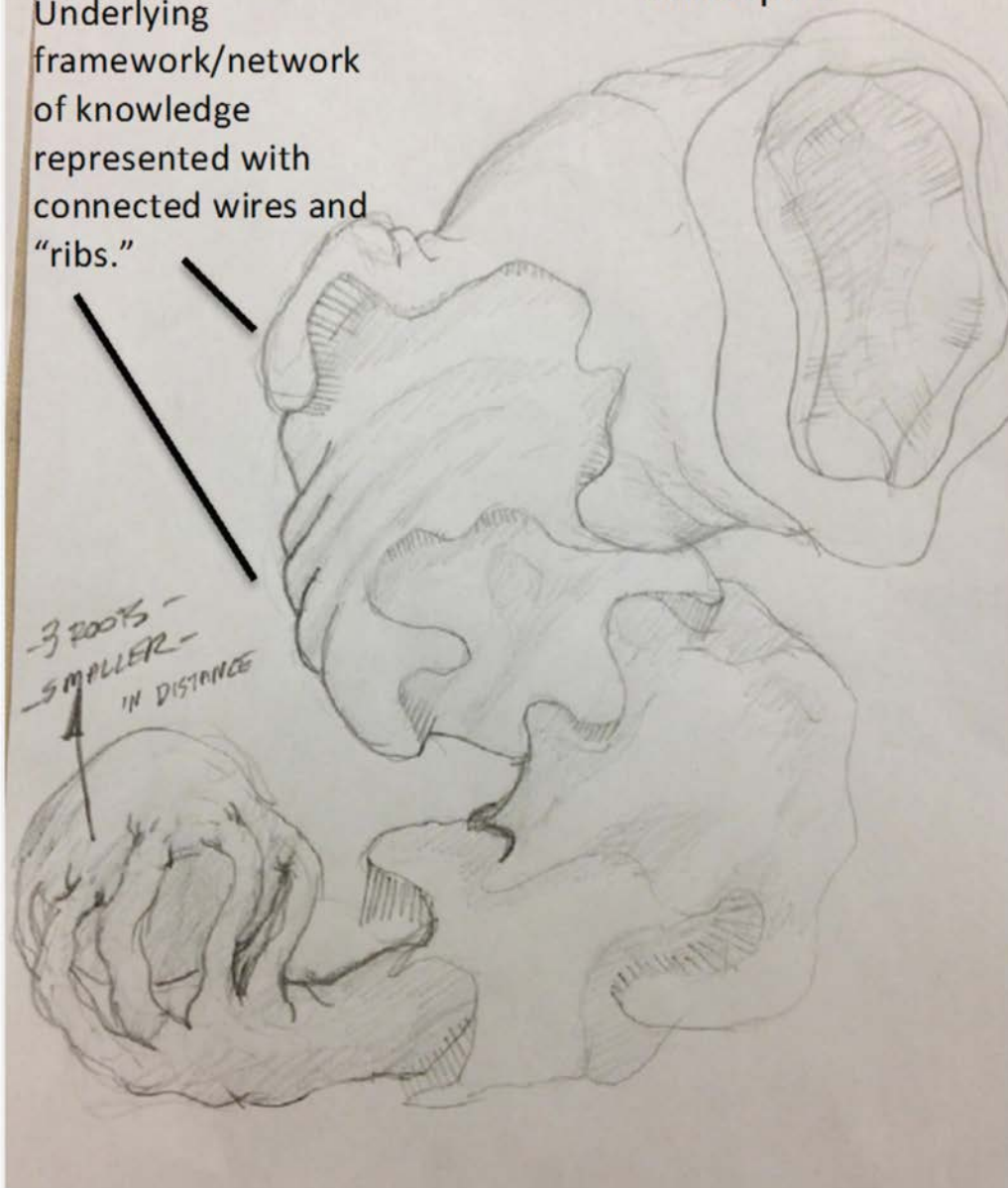
CANALS/VOIDS/
OR NEGATIVE
SPACE REPRESENT
FALSE INFORMATION

WIRES -
SEARCH FOR
NEW KNOWLEDGE



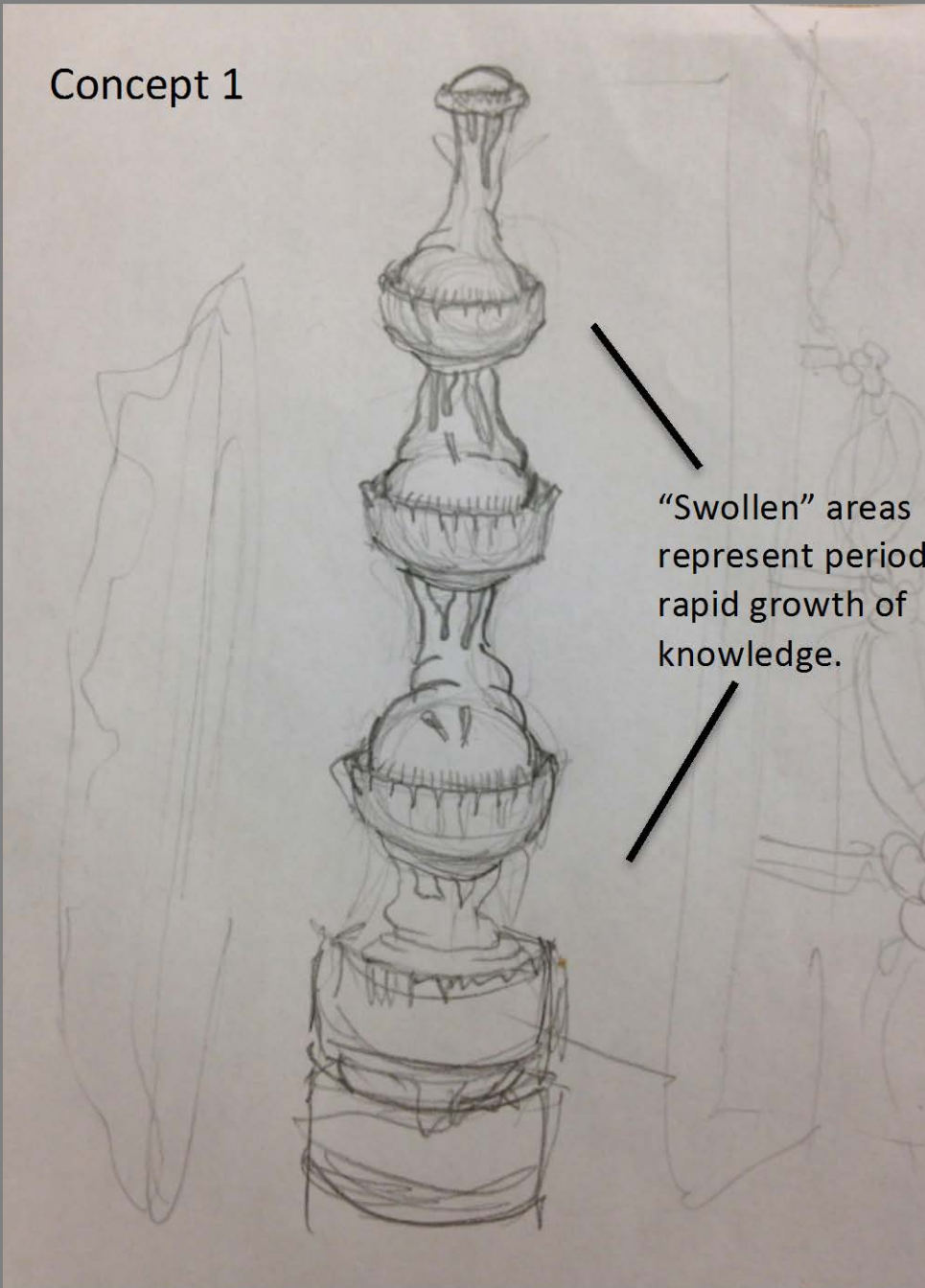
Concept 2

Underlying
framework/network
of knowledge
represented with
connected wires and
"ribs."



3 ROOTS -
SMALLER -
IN DISTANCE

Concept 1



“Swollen” areas
represent period
rapid growth of
knowledge.





"PLATFORMS" WILL BE
COLOR CODED

3 STAGES TOTAL

PRESENT

TIMELINE

NEWER
FIELDS
(INFORMATICS,
COMPUTER SCIENCE)

"WEDGE
PLATFORM"

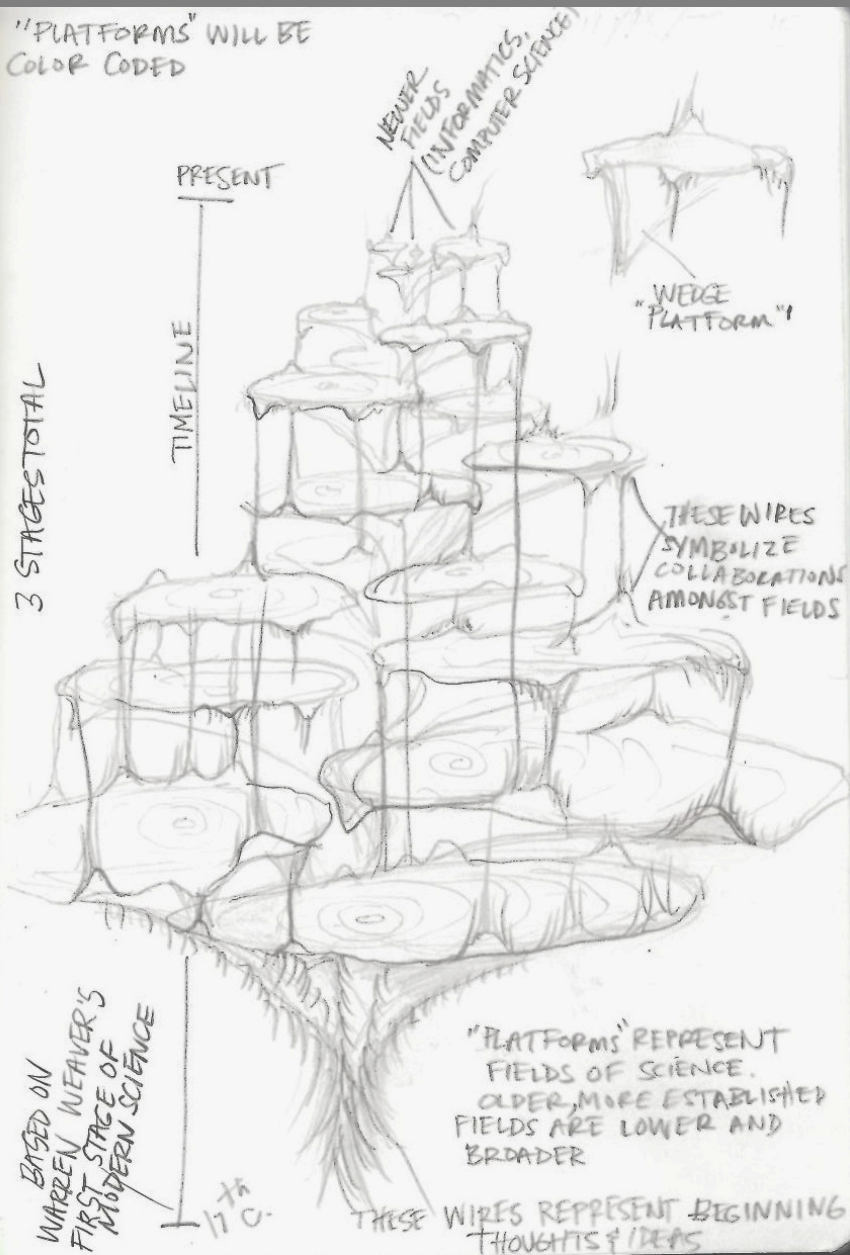
THESE WIRES
SYMBOLIZE
COLLABORATIONS
AMONGST FIELDS

BASED ON
WARREN WEAVER'S
FIRST STAGE OF
MODERN SCIENCE

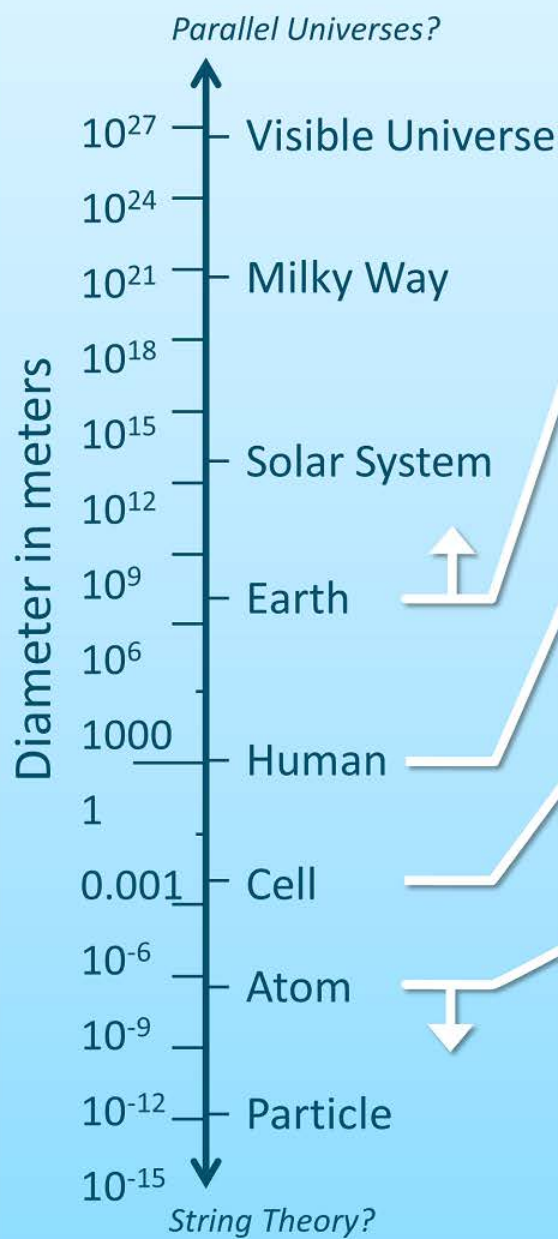
170.

"PLATFORMS" REPRESENT
FIELDS OF SCIENCE.
OLDER, MORE ESTABLISHED
FIELDS ARE LOWER AND
BROADER

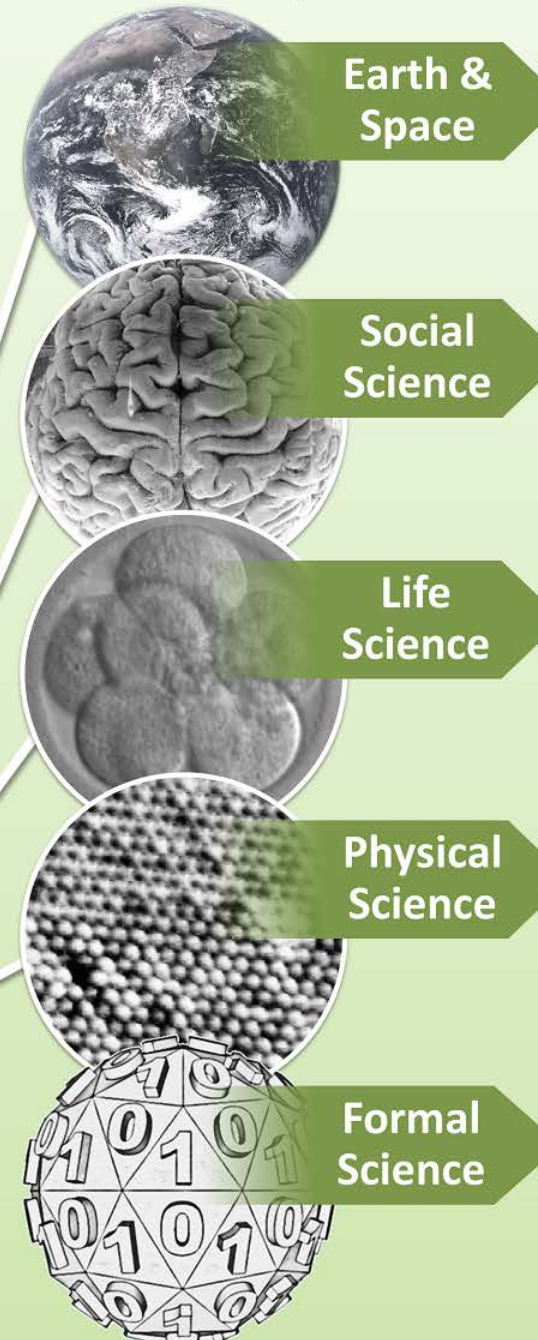
THESE WIRES REPRESENT BEGINNING
THOUGHTS & IDEAS



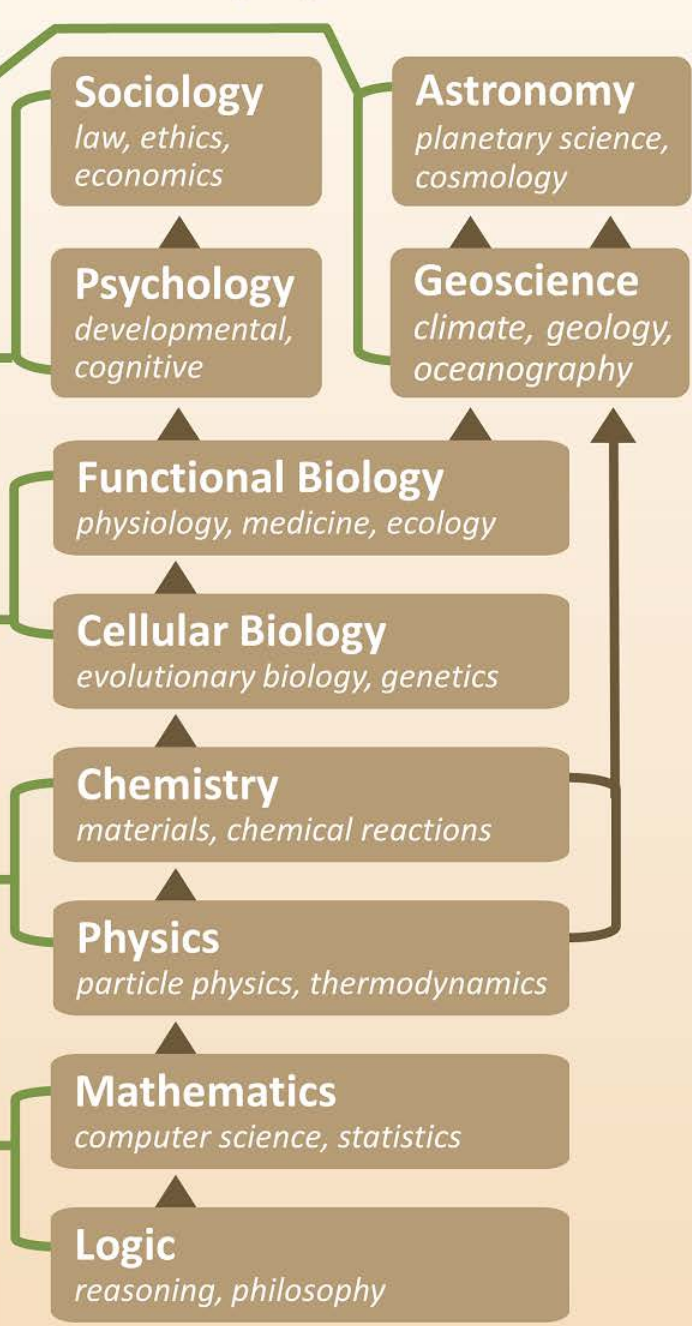
Scale of the Universe



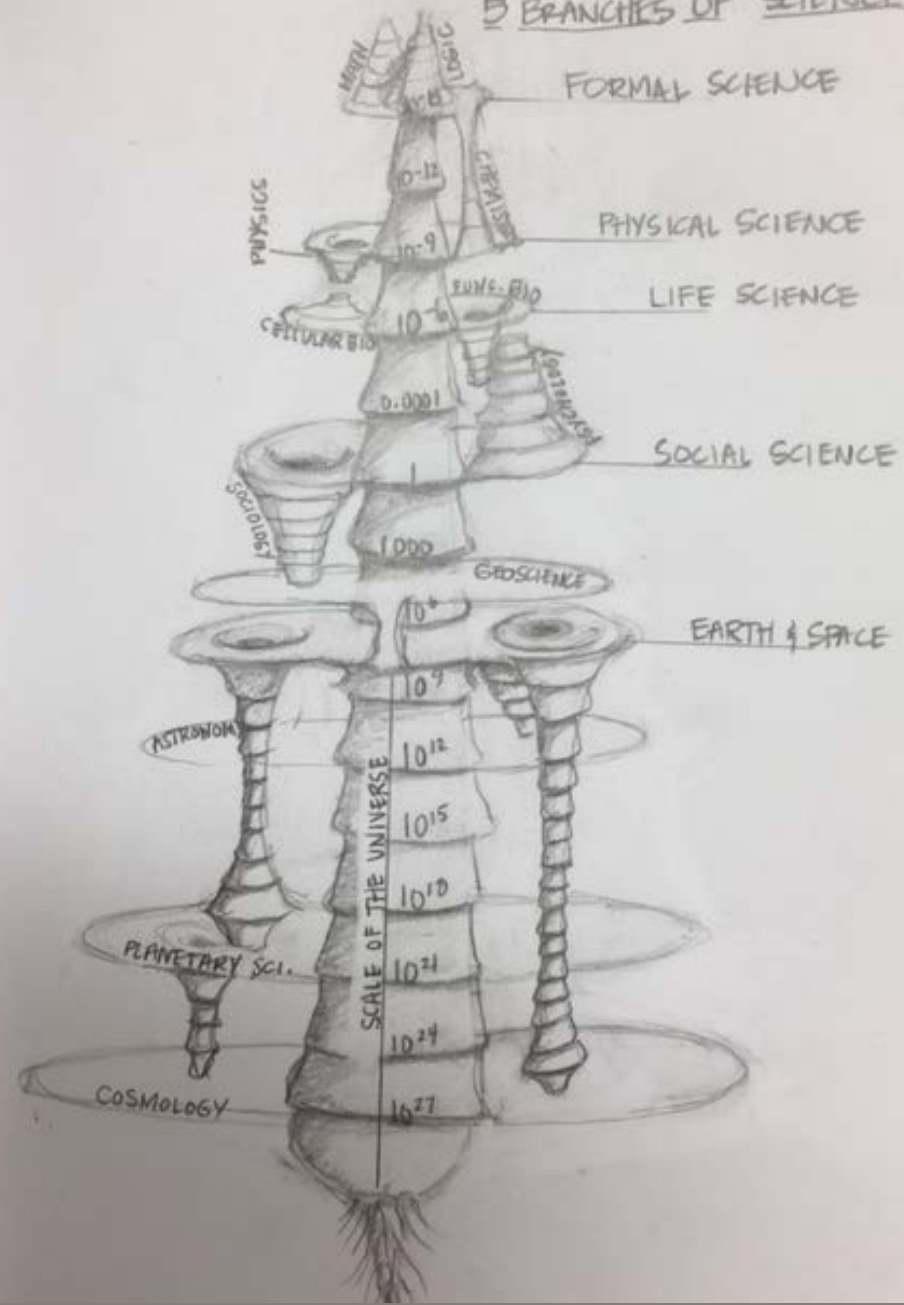
Branches of Science

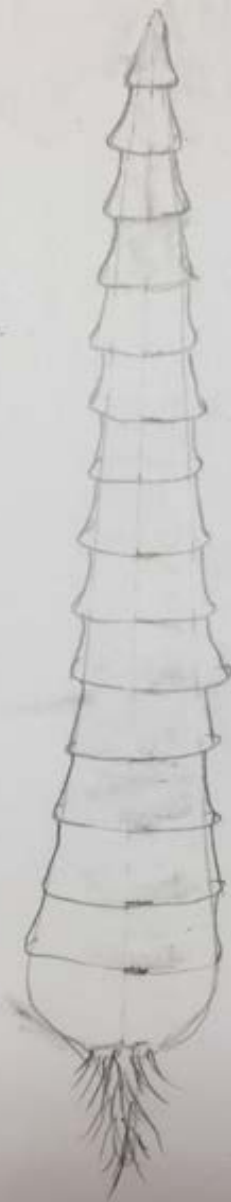


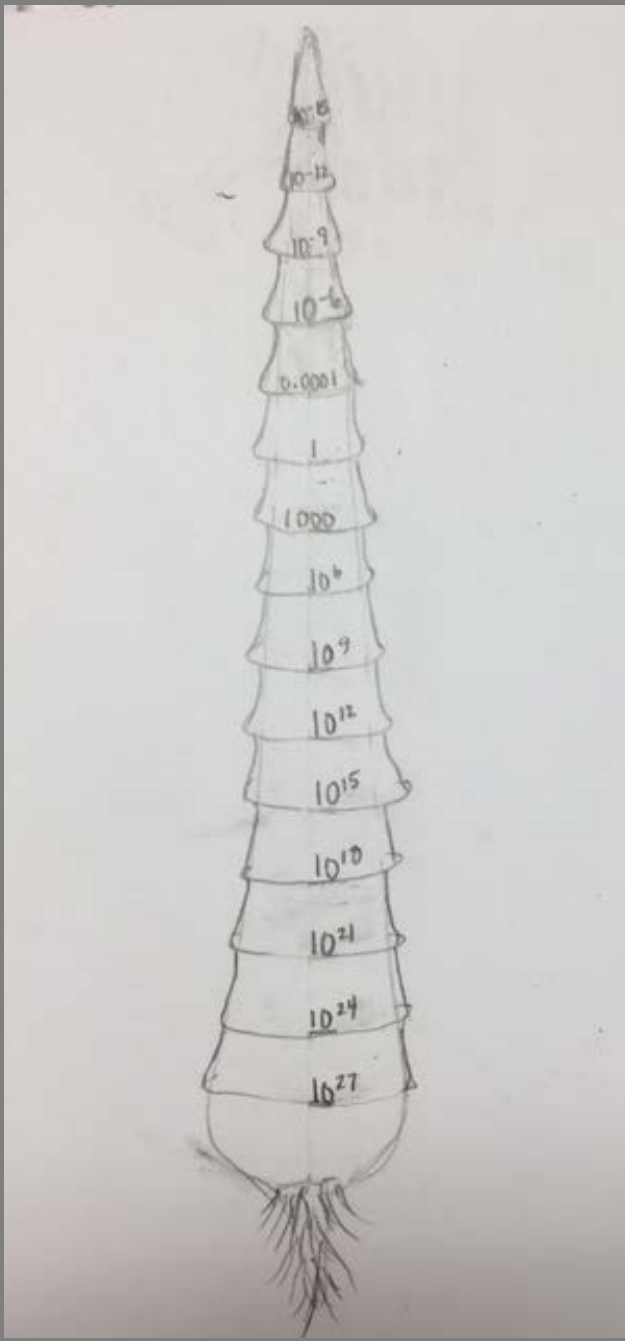
Hierarchy of Science



5 BRANCHES OF SCIENCE





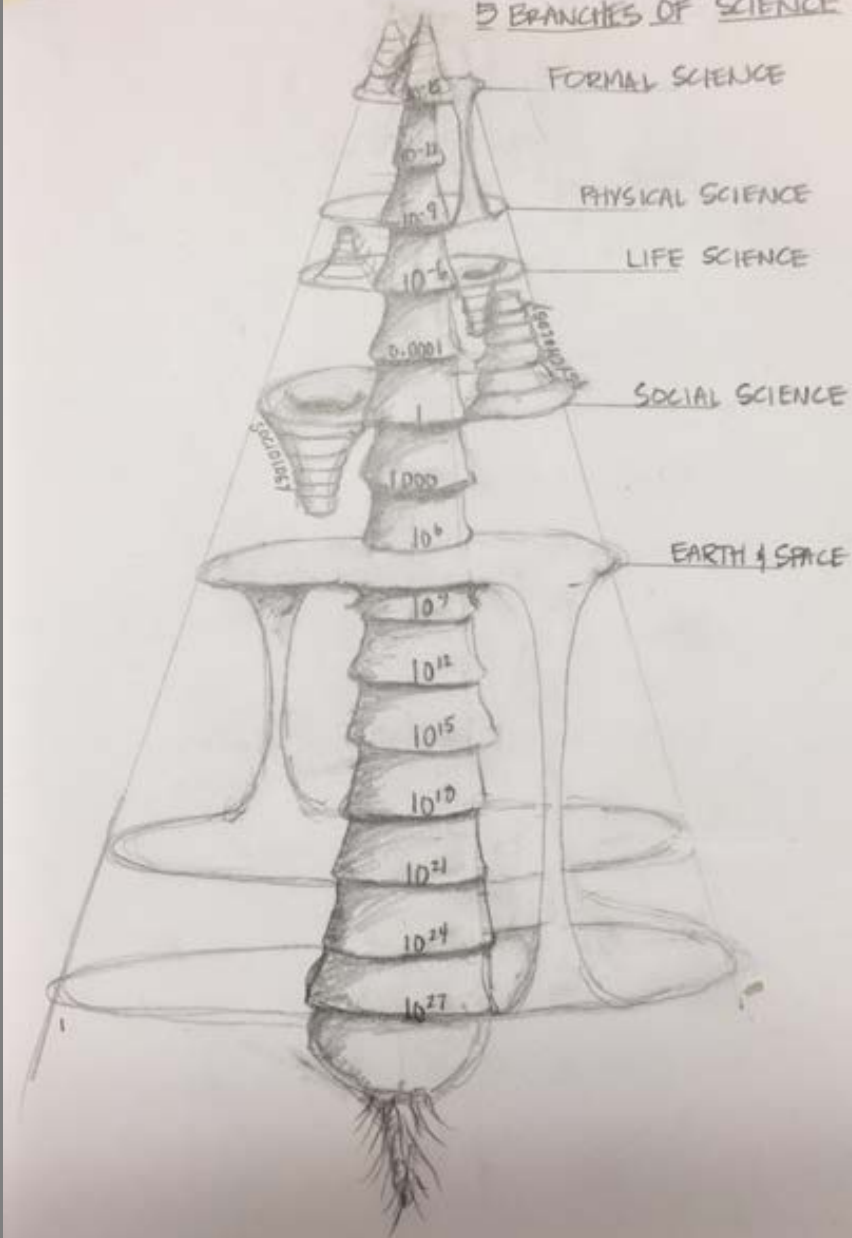




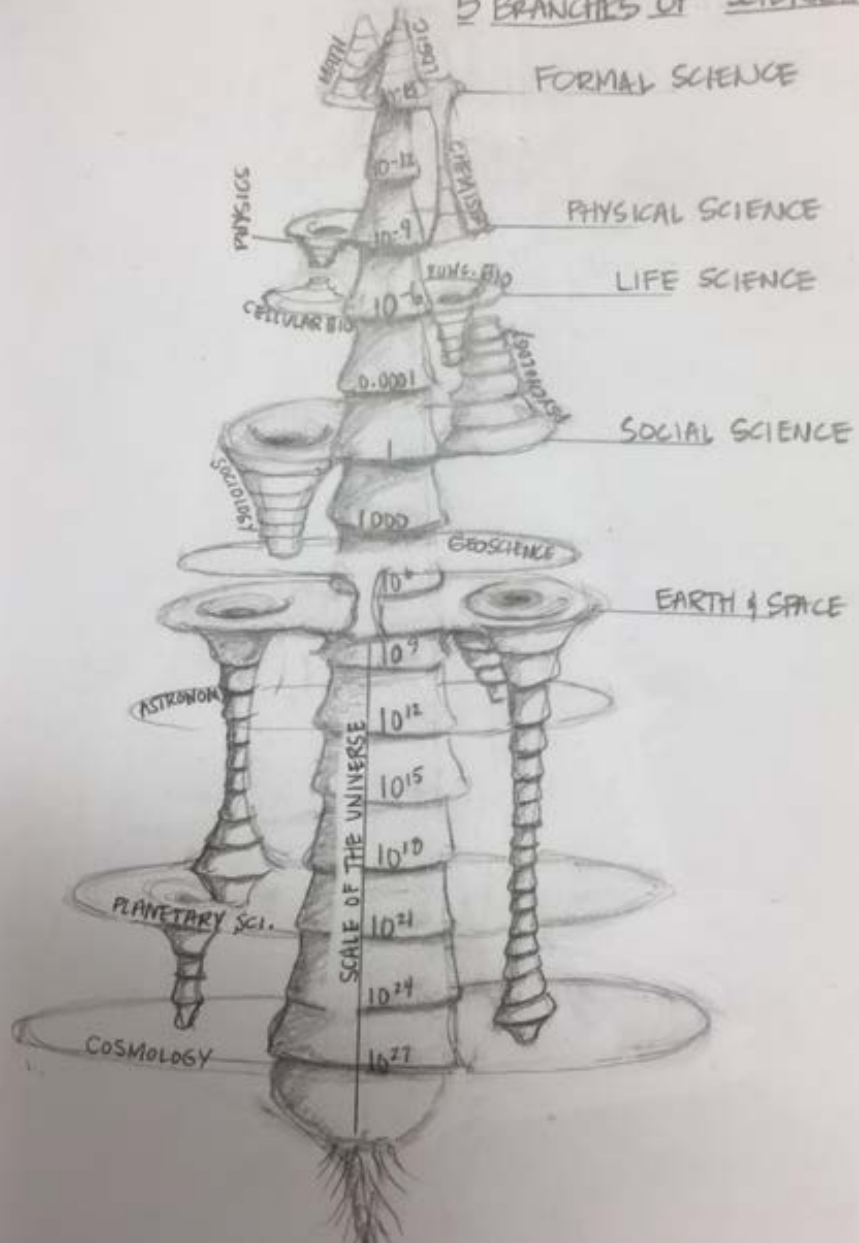
BRANCHES OF SCIENCE



BRANCHES OF SCIENCE



5 BRANCHES OF SCIENCE



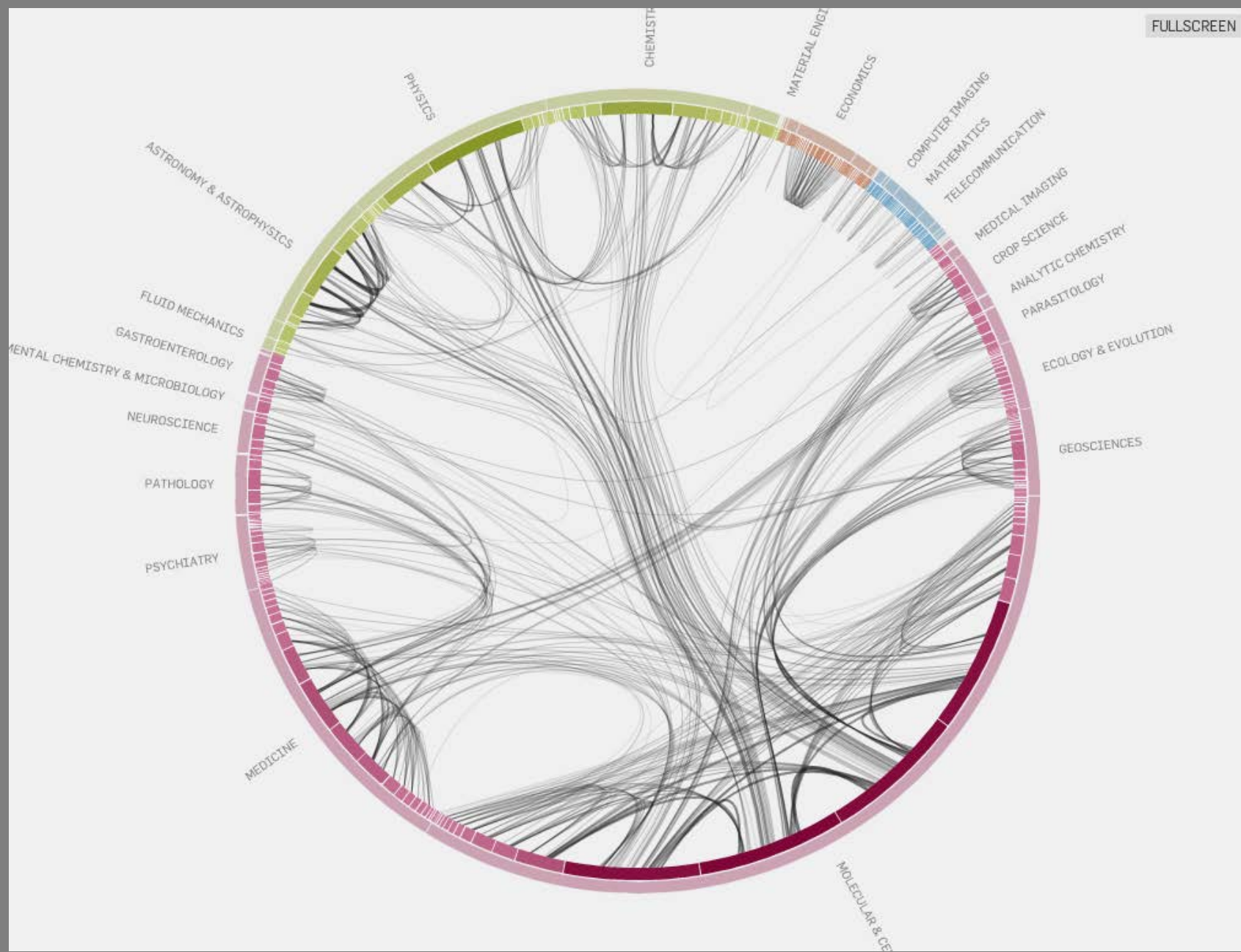
1	Biology	278	62	OliveGreen
2	Biotechnology	301	124	Emerald
3	Medical Specialties	350	177	Red
4	Chemical, Mechanical, & Civil Engineering	217	142	SkyBlue
5	Chemistry	250	230	Blue
6	Earth Sciences	235	48	Mahogany
7	Electrical Engineering & Computer Science	138	196	Lavender
8	Brain Research	410	171	Dandelion
9	Humanities	484	42	Canary
10	Infectious Diseases	359	149	BrickRed
11	Math & Physics	156	229	Mulberry
12	Health Professionals	390	245	Peach
13	Social Sciences	484	147	Yellow











Branch: Earth & Space

Astronomy: the scientific study of stars, planets, and other objects in outer space

Fields: Planetary Science, Cosmology

Color Code: Mahogany



Form	Surface
CALAXY ARMS	STARS
Nesting Cones	
Networks	
Hyperbolic Space	
Spiraling galaxy arms	

Branch: Earth & Space

Geoscience: Any of the various sciences dealing with the Earth's atmosphere, hydrosphere, lithosphere, or biosphere.

Fields: Climate, Geology, Oceanography

Color Code: Mahogany



Earth

Form	Surface
round + blue like earth	
spiraling wavelike geological formation processes	
spherical + bisected (everlasting gobstopper)	
Core Samples	

Branch: Social Science

Sociology: is the study of social behavior or society, including its origins, development, organization, networks, and institutions

Fields: Law, Ethics, Economics

Color Code: Yellow



Human

Form	Surface
<p data-bbox="865 529 1319 686">Cave art Rosetta stone</p> <p data-bbox="813 715 1464 886">human figures as a larger shape</p>	

Branch: Social Science

Psychology: is the study of behavior and mind, embracing all aspects of human experience.

Fields: Developmental, Cognitive

Color Code: Yellow



Human

Form	Surface
<p>illuminated brain</p>	

Branch: Life Science

Functional Biology: is the comparative physiology of plants and animals; i.e. comparing the way different kinds of organisms **function** in the context of their structure (anatomy).

Fields: Physiology, Medicine, Ecology

Color Codes: Olive Green, Emerald, Red, Dandelion, Brick Red, Peach



Form	Surface

Branch: Life Science

Cellular Biology: is the study of **cell** structure and function, and it revolves around the concept that the **cell** is the fundamental unit of life. Focusing on the **cell** permits a detailed understanding of the tissues and organisms that cells compose.

Fields: Evolutionary Biology, Genetics



Form	Surface

Branch: Physical Science

Chemistry: is a branch of physical science that studies the composition, structure, properties and change of matter.

Fields: Materials, Chemical Reactions

Color Code: Blue



Atom

Form	Surface

Branch: Physical Science

Physics: is the natural science that involves the study of matter and its motion through space and time, along with related concepts such as energy and force.

Fields: Particle Physics, Thermodynamics

Color Code: Mulberry



Atom

Form

Surface

Branch: Formal Science

Mathematics: is the study of topics such as quantity (numbers), structure, space, and change.

Fields: Computer Science, Statistics, Informatics

Color Code: Mulberry



String Theory?

Form	Surface

Branch: Formal Science

Logic: systematic study of the principles of valid inference and correct reasoning.

Fields: Philosophy, Semantics, Ethics, Metaphysics

Color Code: Mulberry



String Theory?

Form	Surface

Additional Considerations...

Emerging Fields

1. Neuroparasitology
2. Quantum Biology
3. Exo-meteorology
4. Nutrigenomics
5. Cliodynamics
6. Synthetic Biology,
7. Recombinant Memetics,
8. Computational Social Science
9. Cognitive Economics
10. Organic Electronics
11. Quantitative Biology

Knowledge Voids

Organization: Do fields need to be arranged in order by scale of research subject?

Interactive Component: Marble run

- Strength of material
- Marble most appropriate?