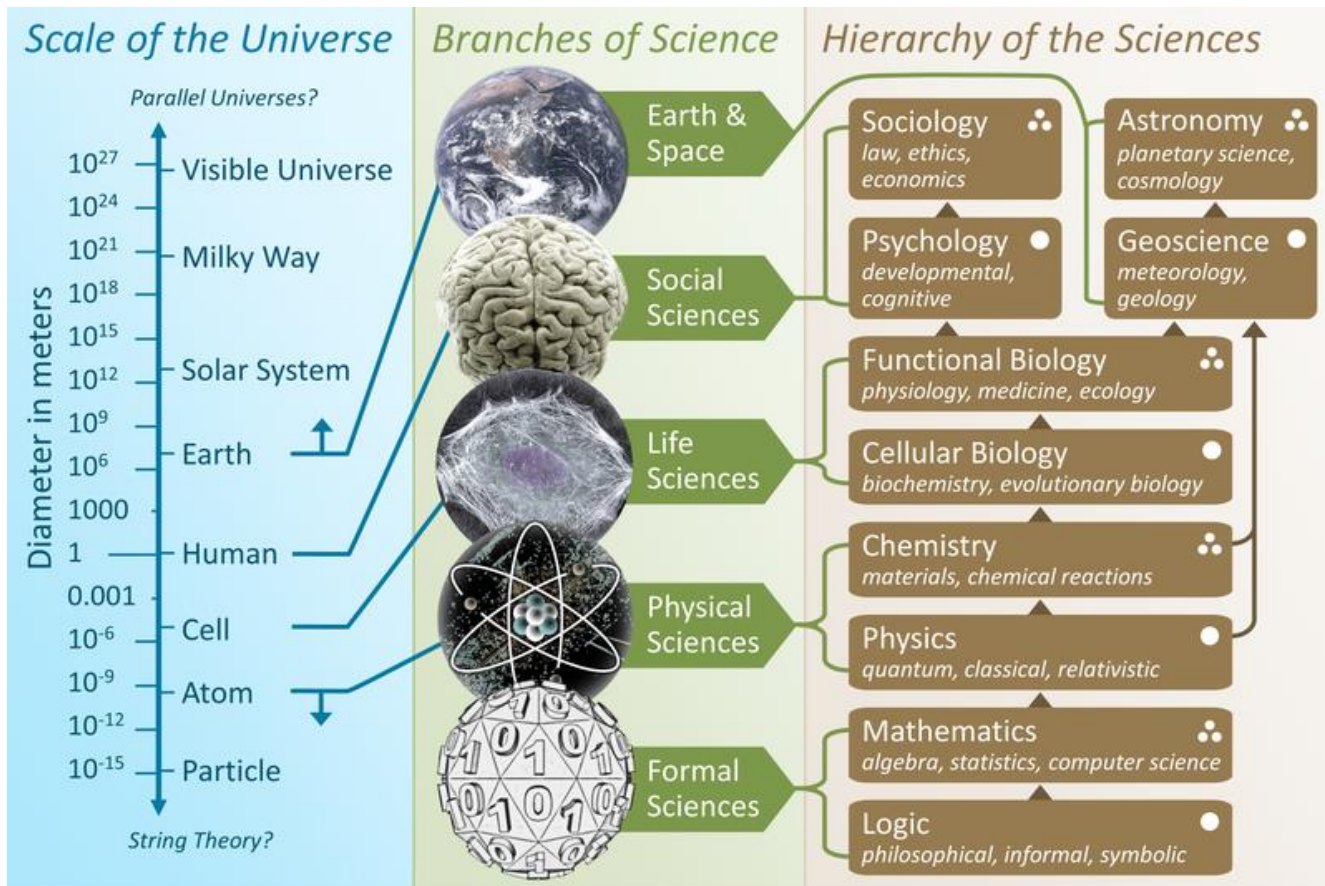


The Periodic Table of Behavior					
		Dimensions of Complexity			
		<u>Material/Physical</u>	<u>Living/Biological</u>	<u>Mental/Psychological</u>	<u>Cultural/Social</u>
Object-Field Relations	Context of Behavior	Field	Ecology	Environment	Society
	Behavioral Entity	Object	Organism	Animal	Human
Three Primary Levels of Object Complexity (Part, Whole, Group)	Groups of Wholes	Molecule	Multicell/Colony	Family-Group	Family-Community-Nation
	Fundamental Whole	Atom	Cell	Animal	Person
	Fundamental Part	Particle	Gene	Neural Network	Symbolic Justification

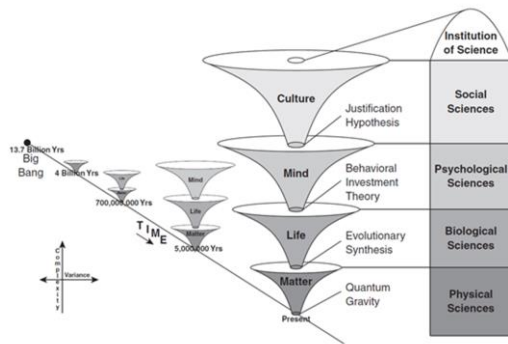
The Periodic Table of Behavior

A new way to categorize the sciences.



Standard maps of science, such as shown here, fail to appreciate the relationship between size/scale and behavioral complexity.

The ToK leads to a new, Periodic Table of Behavior that resolves the issues.

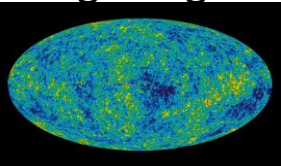


The ToK System leads to the Periodic Table of Behavior. It is based on the premise that behavior is a foundational construct in science, both ontologically and epistemologically. The PTB posits that behavioral patterns are measured and described across different object-field levels and different dimensions of behavioral complexity.

The Periodic Table of Behavior

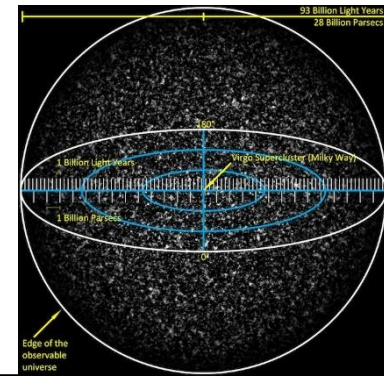
		Dimensions of Complexity			
		<u>Material/Physical</u>	<u>Living/Biological</u>	<u>Mental/Psychological</u>	<u>Cultural/Social</u>
Object-Field Relations	Context of Behavior	Field	Ecology	Environment	Society
	Behavioral Entity	Object	Organism	Animal	Human
Three Primary Levels of Object Complexity (Part, Whole, Group)	Groups of Wholes	Molecule	Multicell/Colony	Family-Group	Family-Community-Nation
	Fundamental Whole	Atom	Cell	Animal	Person
	Fundamental Part	Particle	Gene	Neural Network	Symbolic Justification

Big Bang



Physical Sciences

Visible Universe



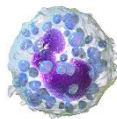
The Periodic Table of Behavior

		Dimensions of Complexity			
		Material/Physical	Living/Biological	Mental/Psychological	Cultural/Social
Object-Field Relations	Context of Behavior	Field	Ecology	Environment	Society
	Behavioral Entity	Object	Organism	Animal	Human
	Three Primary Levels of Object Complexity (Part, Whole, Group)	Molecule	Multicell/Colony	Family-Group	Family-Community-Nation
	Fundamental Whole	Atom	Cell	Animal	Person
	Fundamental Part	Particle	Gene	Neural Network	Symbolic Justification

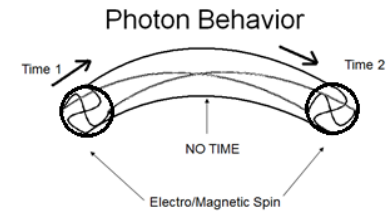
Time
13.8 billion

Scale

Quantum

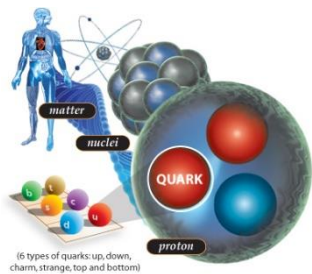


Standard Model of Particle Physics



The Periodic Table of Behavior

The Periodic Table of Behavior					
		Dimensions of Complexity			
		Material/Physical	Living/Biological	Mental/Psychological	Cultural/Social
Object-Field Relations	Context of Behavior	Field	Ecology	Environment	Society
	Behavioral Entity	Object	Organism	Animal	Human
	Groups of Wholes	Molecule	Multicell/Colony	Family-Group	Family-Community-Nation
	Fundamental Whole	Atom	Cell	Animal	Person
Three Primary Levels of Object Complexity (Part, Whole, Group)	Fundamental Part	Particle	Gene	Neural Network	Symbolic Justification



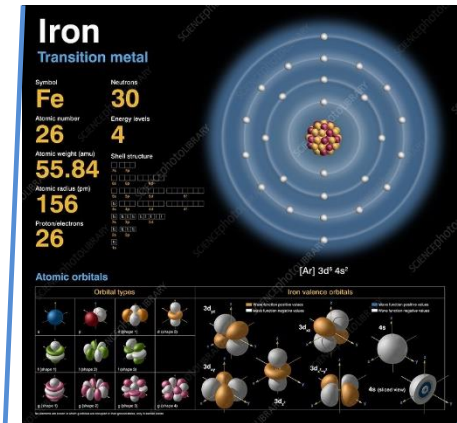
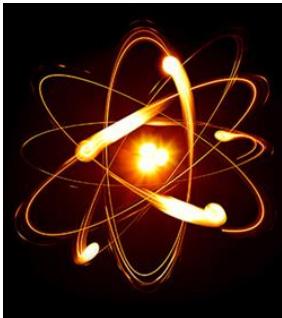
(6 types of quarks up, down, charm, strange, top and bottom)

three generations of matter (fermions)				interactions / force carriers (bosons)
QUARKS	I	II	III	
	2.2 MeV u up	1.3 GeV c charm	173 GeV t top	125.09 GeV H higgs
	4.2 MeV d down	96 MeV s strange	4.18 GeV b bottom	γ photon
	0.5 MeV e electron	106 MeV μ muon	1.78 GeV τ tau	91.1876 GeV Z Z boson
LEPTONS	0.511 MeV ν_e electron neutrino	1.056 MeV ν_μ muon neutrino	1.777 GeV ν_τ tau neutrino	80.379 GeV W W boson
				GAUGE BOSONS VECTOR BOSONS

Periodic Table of the Elements

The Periodic Table of Behavior

		Dimensions of Complexity			
		Material/Physical	Living/Biological	Mental/Psychological	Cultural/Social
Object-Field Relations	Context of Behavior	Field	Ecology	Environment	Society
	Behavioral Entity	Object	Organism	Animal	Human
	Groups of Wholes	Molecule	Multicell/Colony	Family-Group	Family-Community-Nation
	Fundamental Whole	Atom	Cell	Animal	Person
Three Primary Levels of Object Complexity (Part, Whole, Group)		Fundamental Part	Particle	Gene	Neural Network
					Symbolic Justification



Periodic Table of the Elements

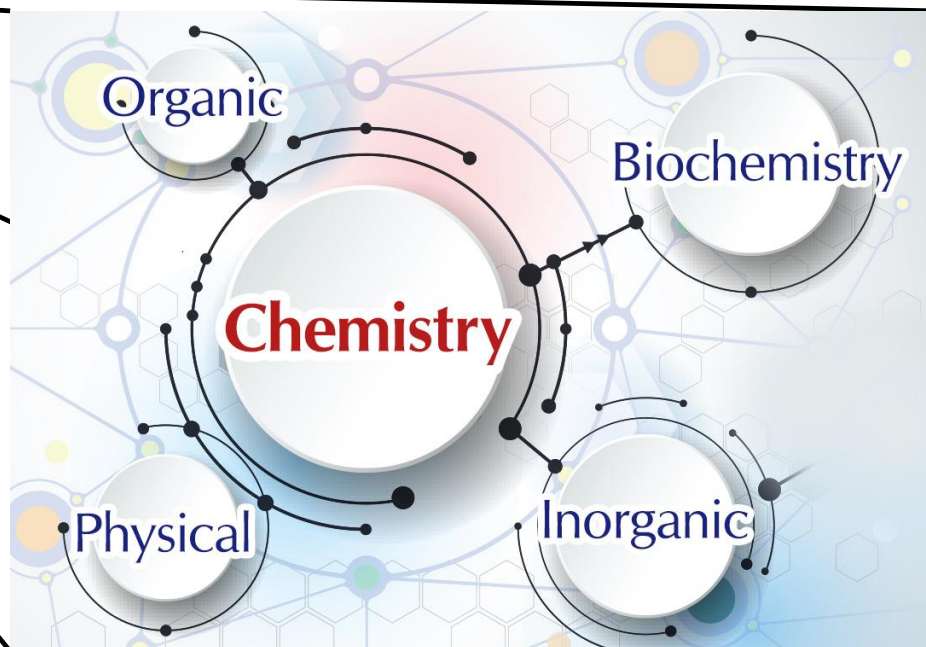
1 1IA H	2 2IA He																	18 VIII Ar	19 1IA K	20 2IA Ca											38 VIII Kr	39 1IA Rb	40 2IA Sr											56 VIII Xe	57 1IA Cs	58 2IA Ba											86 VIII Rn	87 1IA Fr	88 2IA Ra											118 VIII Uuo
---------------	----------------	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	------------------	----------------	-----------------	--	--	--	--	--	--	--	--	--	--	------------------	-----------------	-----------------	--	--	--	--	--	--	--	--	--	--	------------------	-----------------	-----------------	--	--	--	--	--	--	--	--	--	--	------------------	-----------------	-----------------	--	--	--	--	--	--	--	--	--	--	--------------------

Legend: Alkali Metal, Alkaline Earth, Transition Metal, Basic Metal, Semimetals, Nonmetals, Halogens, Noble Gas, Lanthanides, Actinides.

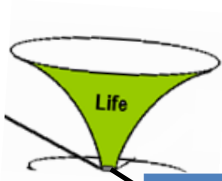
Chemistry

(Science of Molecular Behavior)

The Periodic Table of Behavior					
		Dimensions of Complexity			
		Material/Physical	Living/Biological	Mental/Psychological	Cultural/Social
		Field	Ecology	Environment	Society
Object-Field Relations	Context of Behavior	Field	Ecology	Environment	Society
	Behavioral Entity	Object	Organism	Animal	Human
Three Primary Levels of Object Complexity (Part, Whole, Group)	Groups of Wholes	Molecule	Multicell/Colony	Family-Group	Family-Community-Nation
	Fundamental Whole	Atom	Cell	Animal	Person
	Fundamental Part	Particle	Gene	Neural Network	Symbolic Justification



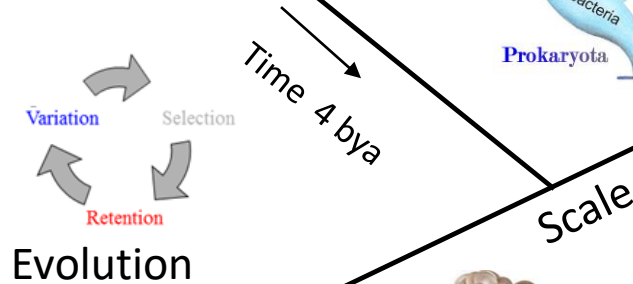
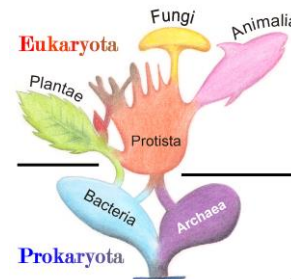
Biological Sciences



The Periodic Table of Behavior

The Periodic Table of Behavior					
		Dimensions of Complexity			
		Material/Physical	Living/Biological	Mental/Psychological	Cultural/Social
Object-Field Relations	Context of Behavior	Field	Ecology	Environment	Society
	Behavioral Entity	Object	Organism	Animal	Human
	Groups of Wholes	Molecule	Multicell/Colony	Family-Group	Family-Community-Nation
Three Primary Levels of Object Complexity (Part, Whole, Group)	Fundamental Whole	Atom	Cell	Animal	Person
	Fundamental Part	Particle	Gene	Neural Network	Symbolic Justification

Ecology



Physiology and Anatomy

Microbiology



Science of Genetics

The Periodic Table of Behavior

The Periodic Table of Behavior					
		Dimensions of Complexity			
		Material/Physical	Living/Biological	Mental/Psychological	Cultural/Social
Object-Field Relations	Context of Behavior	Field	Ecology	Environment	Society
	Behavioral Entity	Object	Organism	Animal	Human
Three Primary Levels of Object Complexity (Part, Whole, Group)	Groups of Wholes	Molecule	Multicell/Colony	Family-Group	Family-Community-Nation
	Fundamental Whole	Atom	Cell	Animal	Person
	Fundamental Part	Particle	Gene	Neural Network	Symbolic Justification



		pollen ♂	
		B	b
pistil ♀	B	BB	Bb
	b	Bb	bb

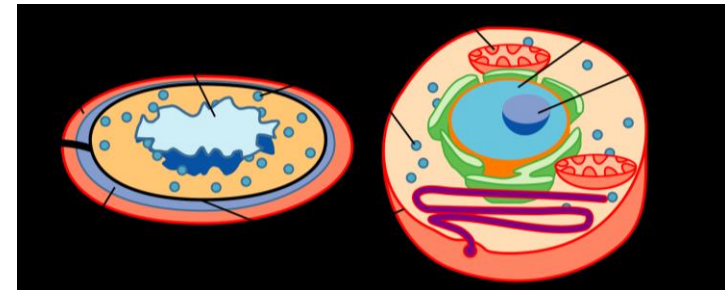


1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 X Y

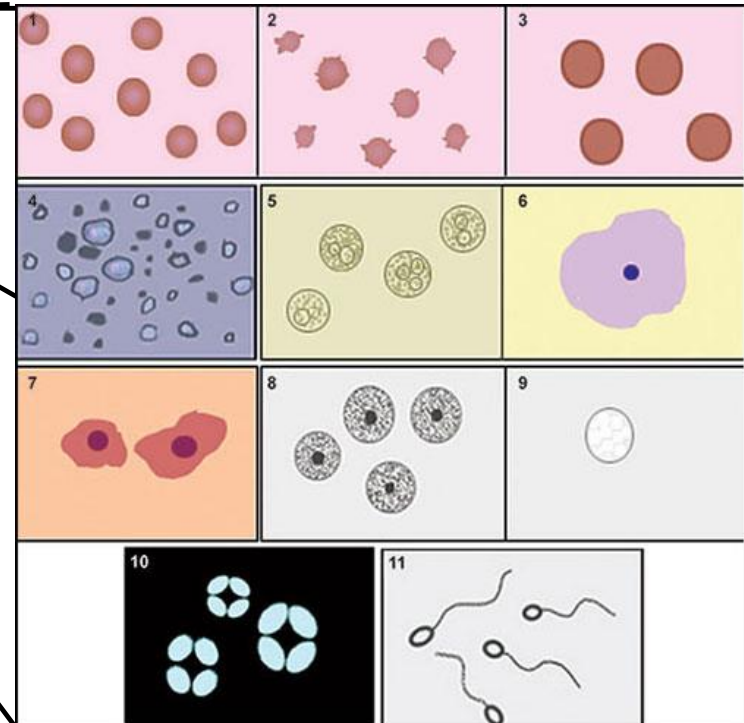
Cytology

Prokaryotes

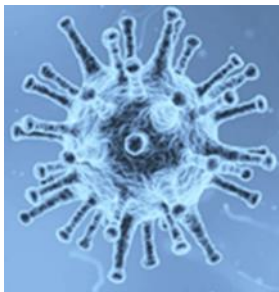
Eukaryotes



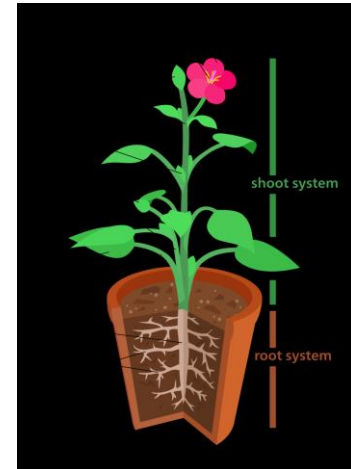
The Periodic Table of Behavior					
		Dimensions of Complexity			
		<u>Material/Physical</u>	<u>Living/Biological</u>	<u>Mental/Psychological</u>	<u>Cultural/Social</u>
Object-Field Relations	Context of Behavior	Field	Ecology	Environment	Society
	Behavioral Entity	Object	Organism	Animal	Human
Three Primary Levels of Object Complexity (Part, Whole, Group)	Groups of Wholes	Molecule	Multicell/Colony	Family-Group	Family-Community-Nation
	Fundamental Whole	Atom	Cell	Animal	Person
	Fundamental Part	Particle	Gene	Neural Network	Symbolic Justification



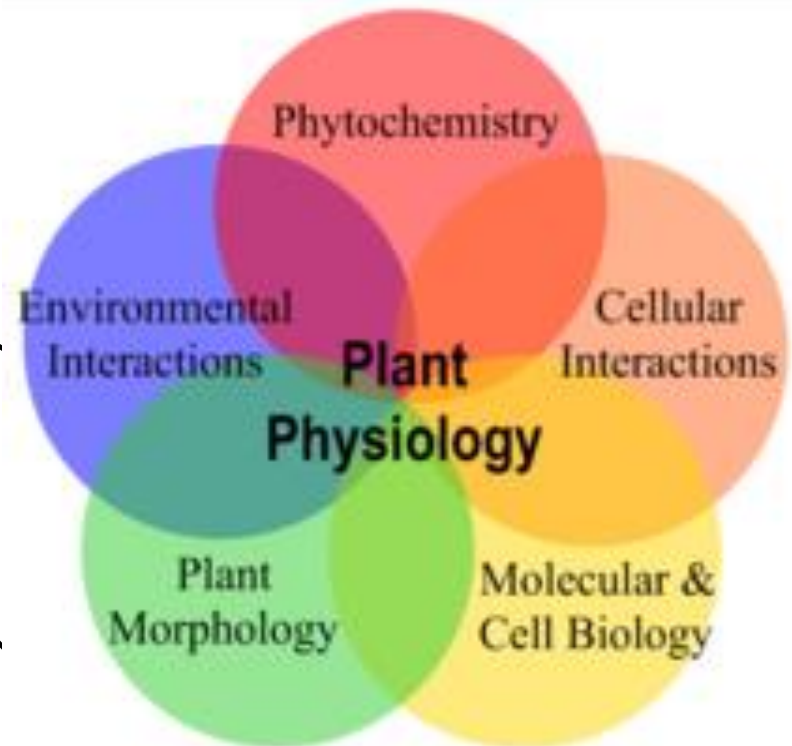
Virology



Botany



The Periodic Table of Behavior					
		Dimensions of Complexity			
		Material/Physical	Living/Biological	Mental/Psychological	Cultural/Social
Object-Field Relations	Context of Behavior	Field	Ecology	Environment	Society
	Behavioral Entity	Object	Organism	Animal	Human
Three Primary Levels of Object Complexity (Part, Whole, Group)	Groups of Wholes	Molecule	Multicell/Colony	Family-Group	Family-Community-Nation
	Fundamental Whole	Atom	Cell	Animal	Person
	Fundamental Part	Particle	Gene	Neural Network	Symbolic Justification



Mind, Brain, Animal Behavior Sciences



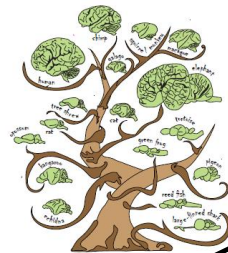
The Periodic Table of Behavior

The Periodic Table of Behavior					
		Dimensions of Complexity			
		Material/Physical	Living/Biological	Mental/Psychological	Cultural/Social
Object-Field Relations	Context of Behavior	Field	Ecology	Environment	Society
	Behavioral Entity	Object	Organism	Animal	Human
Three Primary Levels of Object Complexity (Part, Whole, Group)	Groups of Wholes	Molecule	Multicell/Colony	Family-Group	Family-Community-Nation
	Fundamental Whole	Atom	Cell	Animal	Person
	Fundamental Part	Particle	Gene	Neural Network	Symbolic Justification

Behavioral Ecology



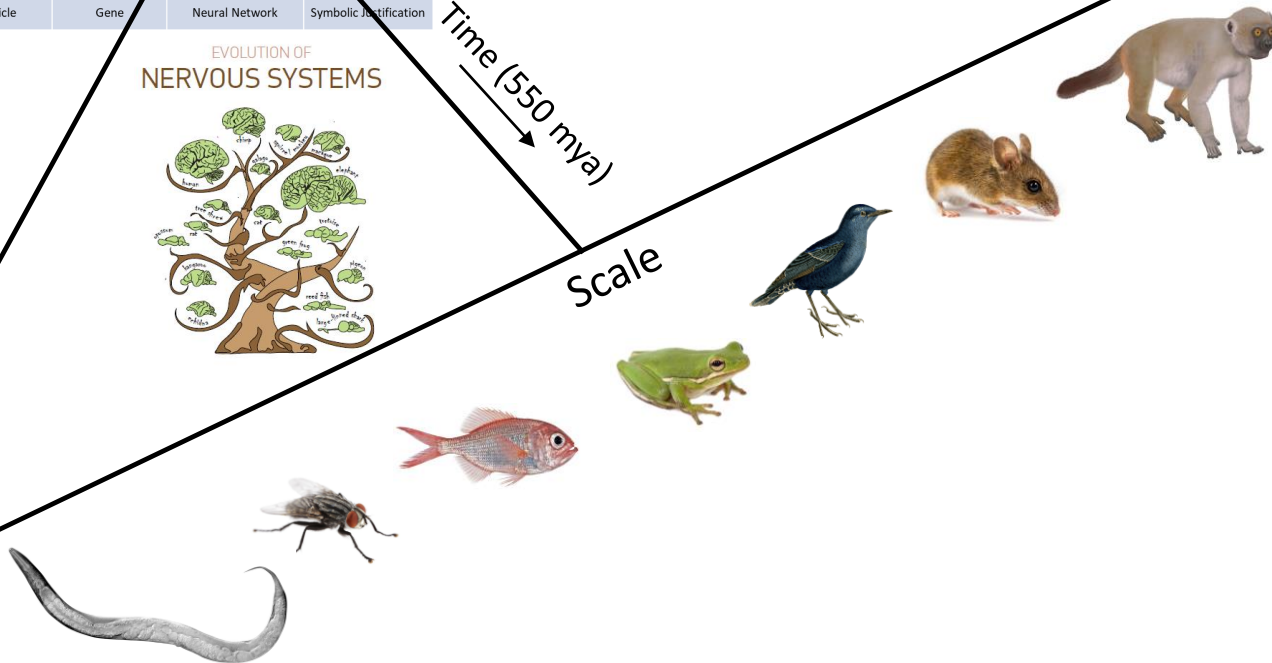
EVOLUTION OF NERVOUS SYSTEMS



Time (550 mya)

Scale

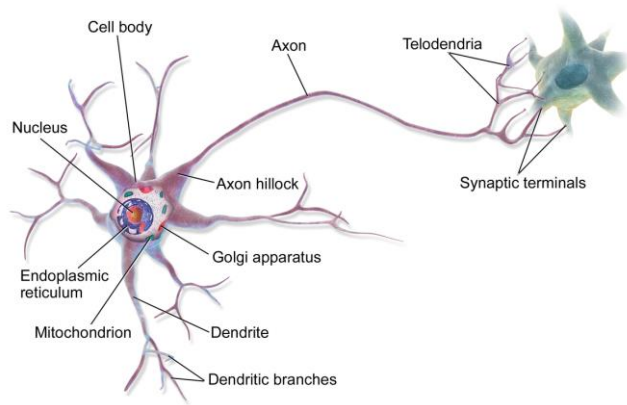
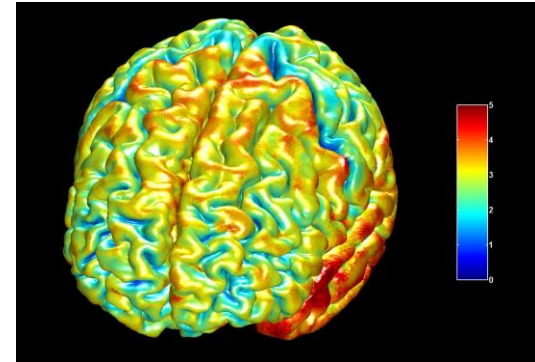
Neuroscience



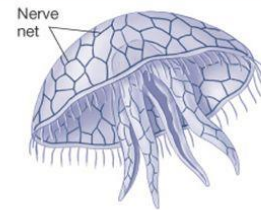
Neuroscience

The Periodic Table of Behavior

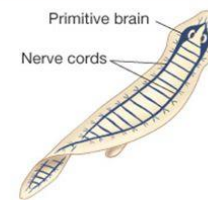
The Periodic Table of Behavior					
		Dimensions of Complexity			
		Material/Physical	Living/Biological	Mental/Psychological	Cultural/Social
Object-Field Relations	Context of Behavior	Field	Ecology	Environment	Society
	Behavioral Entity	Object	Organism	Animal	Human
	Groups of Wholes	Molecule	Multicell/Colony	Family-Group	Family-Community-Nation
Three Primary Levels of Object Complexity (Part, Whole, Group)	Fundamental Whole	Atom	Cell	Animal	Person
	Fundamental Part	Particle	Gene	Neural Network	Symbolic Justification



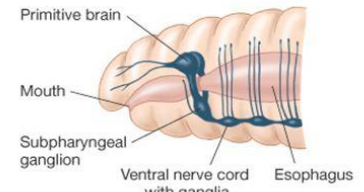
Evolution of the Nervous System



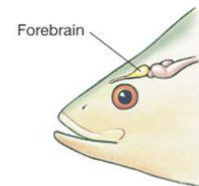
(a) Nerve net of jellyfish



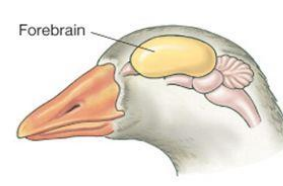
(b) The flatworm nervous system has a primitive brain.



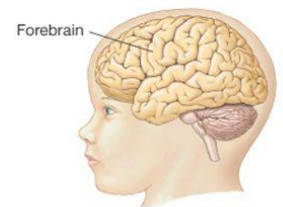
(c) The earthworm nervous system has a simple brain and ganglia along a nerve cord.



(d) The fish forebrain is small compared to remainder of brain.



(e) The goose forebrain is larger.

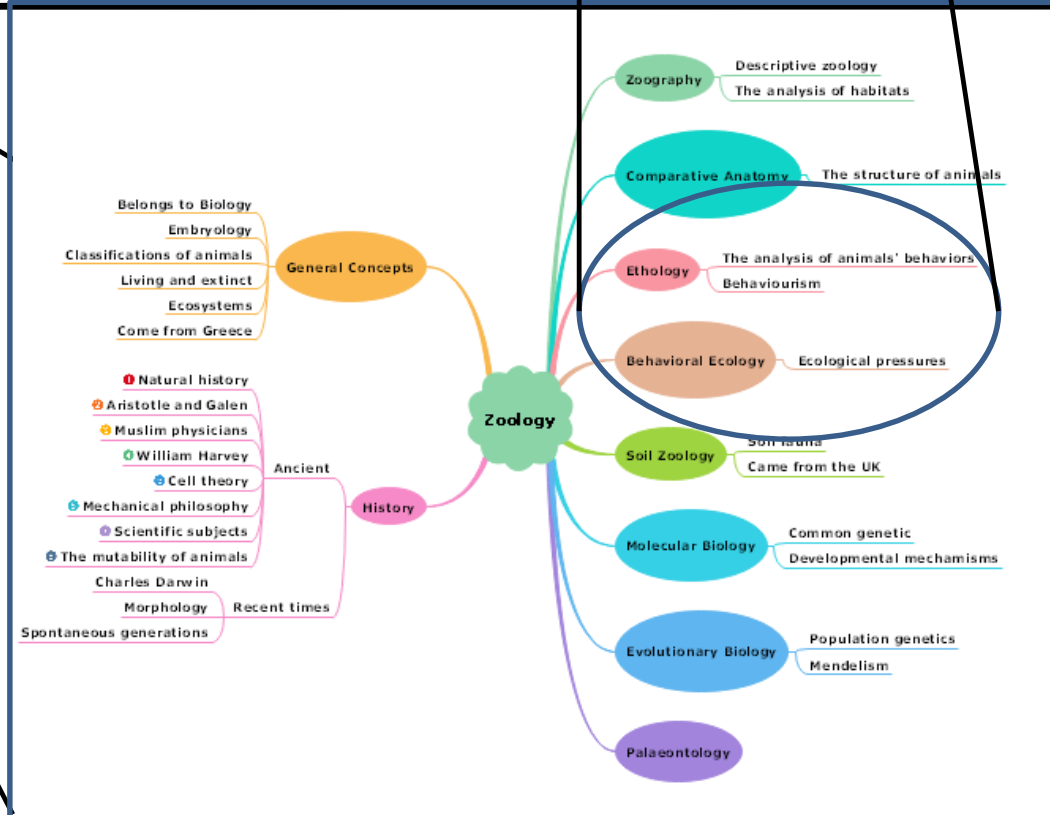


(f) The human forebrain (cerebrum) dominates the brain.

Zoology (Animals as Organism) and Ethology and Comparative Psychology (Animal Behavior in Nature)

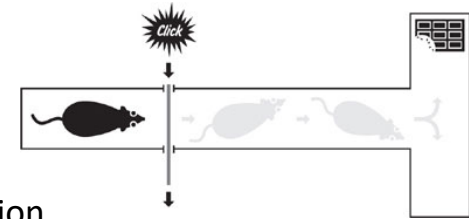


The Periodic Table of Behavior					
		Dimensions of Complexity			
		Material/Physical	Living/Biological	Mental/Psychological	Cultural/Social
Object-Field Relations	Context of Behavior	Field	Ecology	Environment	Society
	Behavioral Entity	Object	Organism	Animal	Human
Three Primary Levels of Object Complexity (Part, Whole, Group)	Groups of Wholes	Molecule	Multicell/Colony	Family-Group	Family-Community-Nation
	Fundamental Whole	Atom	Cell	Animal	Person
	Fundamental Part	Particle	Gene	Neural Network	Symbolic Justification

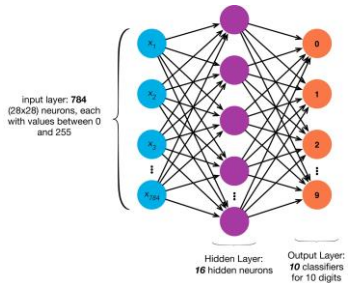
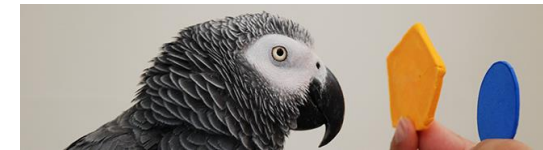


Cognitive Behavioral Neurosciences (Experimental Analysis of Animal Behavior)

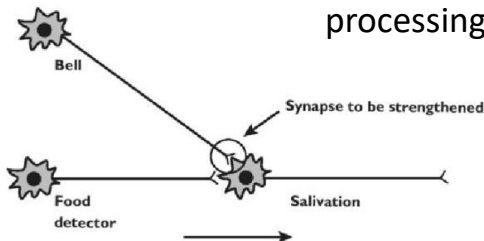
The Periodic Table of Behavior					
		Dimensions of Complexity			
		Material/Physical	Living/Biological	Mental/Psychological	Cultural/Social
Object-Field Relations	Context of Behavior	Field	Ecology	Environment	Society
	Behavioral Entity	Object	Organism	Animal	Human
Three Primary Levels of Object Complexity (Part, Whole, Group)	Groups of Wholes	Molecule	Multicell/Colony	Family-Group	Family-Community-Nation
	Fundamental Whole	Atom	Cell	Animal	Person
	Fundamental Part	Particle	Gene	Neural Network	Symbolic Justification



Decision Making and Higher Cognitive Processes



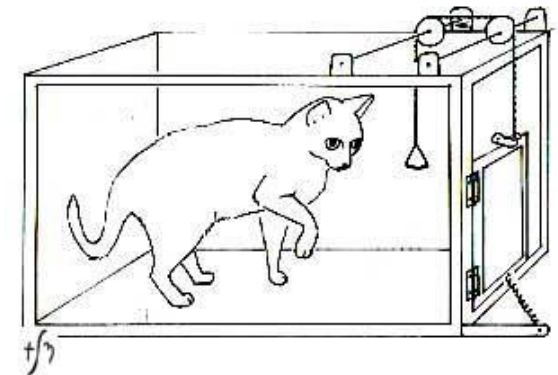
Neural Networks, learning and information processing



Associative Conditioning

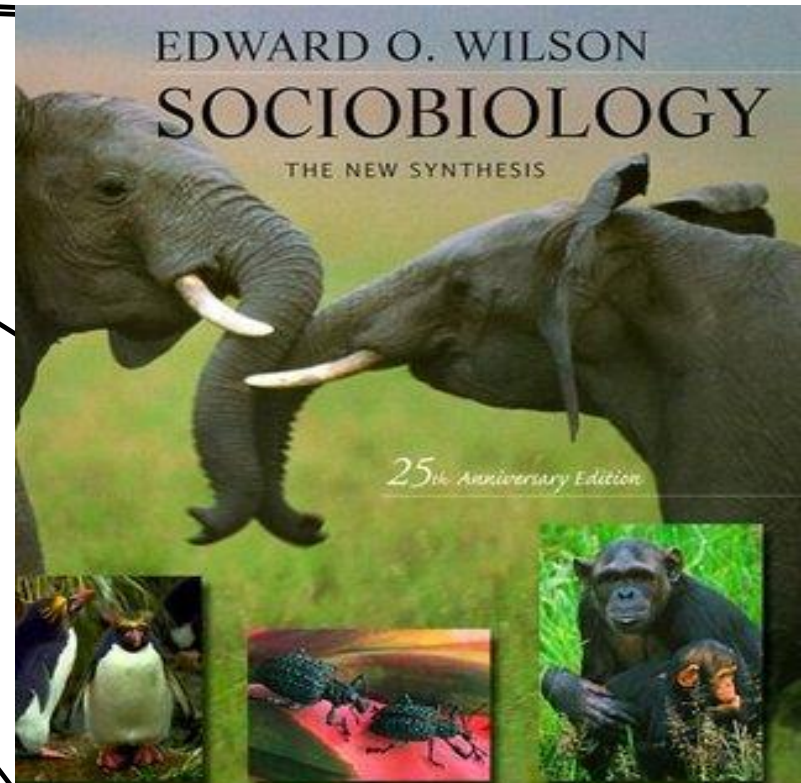
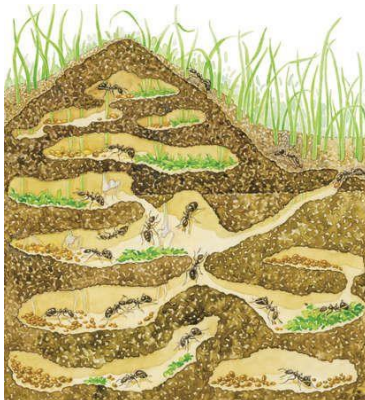


Operant Conditioning

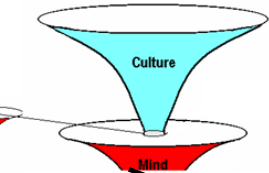


Sociobiology

The Periodic Table of Behavior					
		Dimensions of Complexity			
		<u>Material/Physical</u>	<u>Living/Biological</u>	<u>Mental/Psychological</u>	<u>Cultural/Social</u>
Object-Field Relations	Context of Behavior	Field	Ecology	Environment	Society
	Behavioral Entity	Object	Organism	Animal	Human
Three Primary Levels of Object Complexity (Part, Whole, Group)	Groups of Wholes	Molecule	Multicell/Colony	Family-Group	Family-Community-Nation
	Fundamental Whole	Atom	Cell	Animal	Person
	Fundamental Part	Particle	Gene	Neural Network	Symbolic Justification



Human Social Sciences

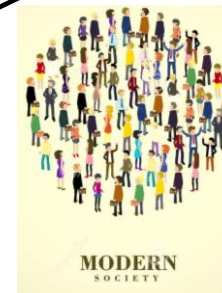
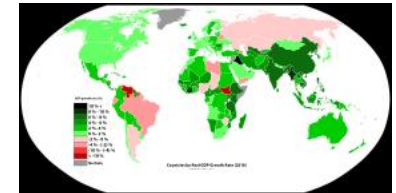


The Periodic Table of Behavior					
		Dimensions of Complexity			
		Material/Physical	Living/Biological	Mental/Psychological	Cultural/Social
Object-Field Relations	Context of Behavior	Field	Ecology	Environment	Society
	Behavioral Entity	Object	Organism	Animal	Human
Three Primary Levels of Object Complexity (Part, Whole, Group)	Groups of Wholes	Molecule	Multicell/Colony	Family-Group	Family-Community-Nation
	Fundamental Whole	Atom	Cell	Animal	Person
	Fundamental Part	Particle	Gene	Neural Network	Symbolic Justification

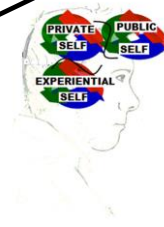
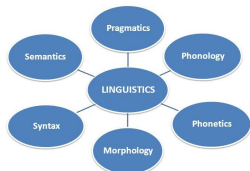


Time
200,000

Scale



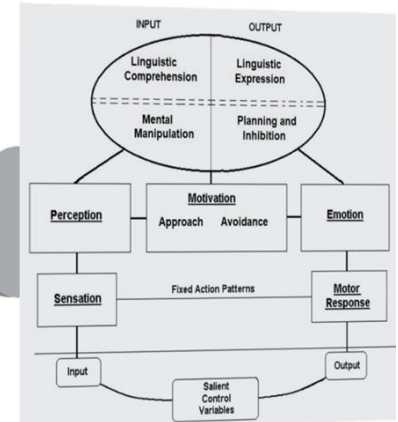
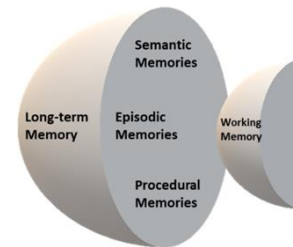
Branches of linguistics



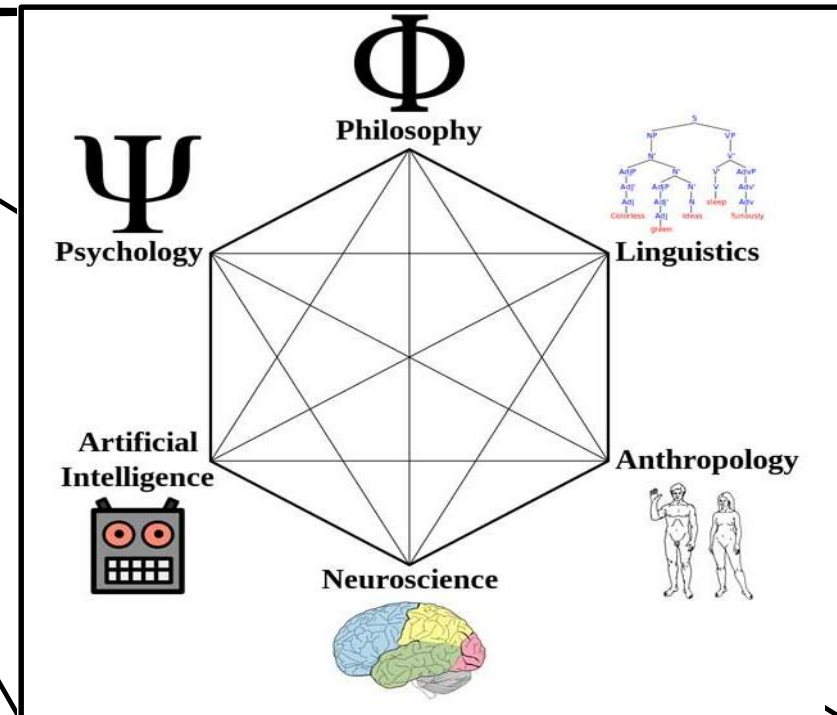
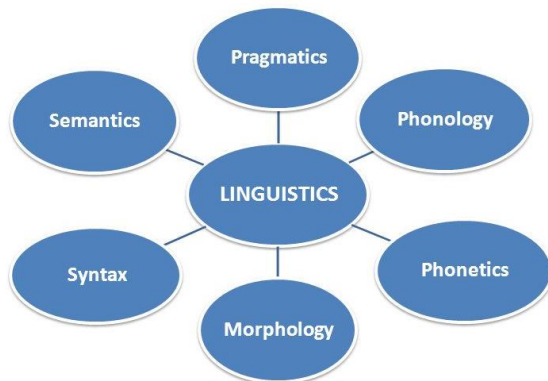
Human Cognitive Science

The Periodic Table of Behavior

The Periodic Table of Behavior					
		Dimensions of Complexity			
		Material/Physical	Living/Biological	Mental/Psychological	Cultural/Social
Object-Field Relations	Context of Behavior	Field	Ecology	Environment	Society
	Behavioral Entity	Object	Organism	Animal	Human
	Three Primary Levels of Object Complexity (Part, Whole, Group)	Molecule	Multicell/Colony	Family-Group	Family-Community-Nation
		Atom	Cell	Animal	Person
		Particle	Gene	Neural Network	Symbolic Justification



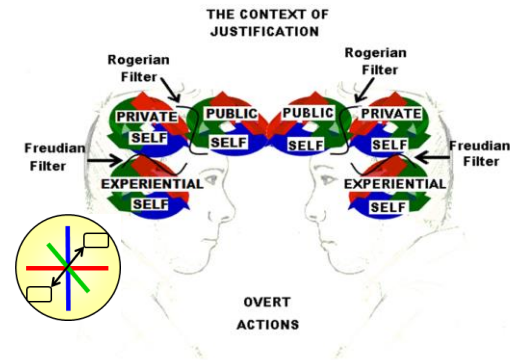
Branches of linguistics



Human Psychology (Development, Personality, Social)

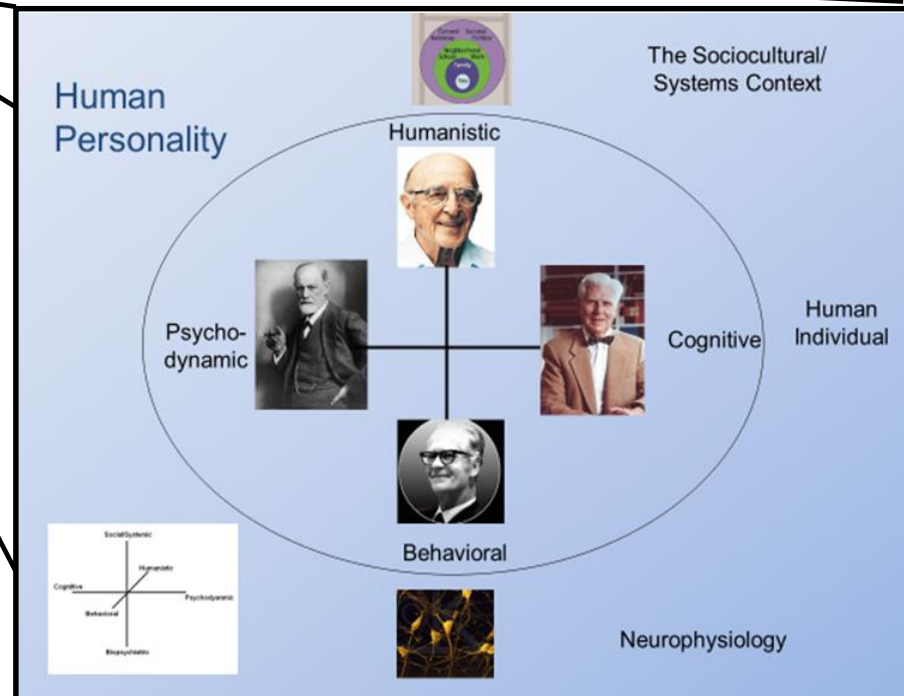
The Periodic Table of Behavior

Dimensions of Complexity					
		Material/Physical	Living/Biological	Mental/Psychological	Cultural/Social
Object-Field Relations	Context of Behavior	Field	Ecology	Environment	Society
	Behavioral Entity	Object	Organism	Animal	Human
	Three Primary Levels of Object Complexity (Part, Whole, Group)	Groups of Wholes	Molecule	Multicell/Colony	Family-Community-Nation
		Atom	Cell	Animal	Person
		Particle	Gene	Neural Network	Symbolic Justification



Erikson's Stages of Psychosocial Development

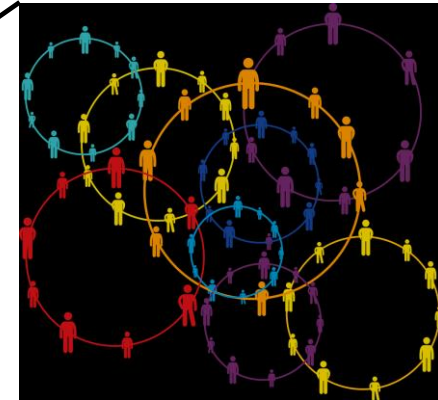
Approximate Age	Psycho Social Crisis
Infant - 18 months	Trust vs. Mistrust
18 months - 3 years	Autonomy vs. Shame & Doubt
3 - 5 years	Initiative vs. Guilt
5 -13 years	Industry vs. Inferiority
13 -21 years	Identity vs. Role Confusion
21 - 39 years	Intimacy vs. Isolation
40 - 65 years	Generativity vs. Stagnation
65 and older	Ego Integrity vs. Despair



Social Sciences

(Socio-Cultural Group Economic Behavior)

Sociology



The Periodic Table of Behavior					
		Dimensions of Complexity			
		Material/Physical	Living/Biological	Mental/Psychological	Cultural/Social
Object-Field Relations	Context of Behavior	Field	Ecology	Environment	Society
	Behavioral Entity	Object	Organism	Animal	Human
Three Primary Levels of Object Complexity (Part, Whole, Group)	Groups of Wholes	Molecule	Multicell/Colony	Family-Group	Family-Community-Nation
	Fundamental Whole	Atom	Cell	Animal	Person
	Fundamental Part	Particle	Gene	Neural Network	Symbolic Justification

Anthropology



Economics

