

# *Medicine, Law, & Economics: Their Shared Anatomy and Physiology Information infrastructure.*

*A Systems Biology Solution.*

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## Summary proposition:

In 1963, Milton Freidman and Anna Schwartz published *A Monetary History of the United States, 1867-1960*'. Their research is a foundation argument for the principles of monetary theory. Their research was strongly driven by the banking crisis during the Great Depression of 1929.

## Central Thesis:

It is proposed that the efficiency and effectiveness of the 4.3 trillion dollar healthcare economy in the United States can be improved by implementing the solutions communication anatomy and physiology model in this paper.

This paper presents a nonobvious, systems biology solution: the anatomy and physiology of money. By identifying the shared anatomy and physiology of medicine, law and economics, the common underlying biological forces can be identified, and cultivated in society, business and industry.. This can be shaped into a stimulus initiative similar to fiscal and monetary policy – yet, with a strong labor economics and healthcare focus.

This paper asserts that monetary theory, and monetary policy are subsets of information theory, information economic, and are built upon the information and communication systems and structures of human biology. This is based upon the assertion that money is an information and communication tool that is an extension of human anatomy and physiology of exchange. Human language use is a foundation in barter markets and precedes the use of fiat currency. Money is a subset of the evolution of human tool making and the development of human symbols, signs and language.

Human anatomy and physiology are root principles beneath monetary theory. More so, this paper presents an argument that human anatomy and physiology are at the root of all academic disciplines. This paper focuses on the shared anatomy and physiology principles between the disciplines of medicine, law and economics (MLE).

It is proposed that the model of human anatomy and physiology that will be proposed is an economic resource to reduce societal costs and increase a range of societal benefits.

By identifying the underlying shared anatomy and physiology, it is asserted that basic biological ‘work’, ‘measurement’, and ‘communication’ principles can be illuminated and lead to improved productivity, innovation and design, across the social economy.

## Proposed: The Anatomy and Physiology of Money

This draft argument lays the foundation for a parallel, human factors principle to monetary theory. A somatic, anatomy and physiology contribution to information, communication and exchange theory. The tentatively name for the purpose of this document: ‘The Anatomy and Physiology of Money’ (AP Money)

The goal is to bring more anatomy and physiology into the field of economics. And as well, into law. And yes, to improve integration of anatomy and physiology principles into medicine and healthcare.

As markets, money, language use, and underlying human AP – all facilitate exchange and support society to flourish.

The central tactic is to teach and demonstrate more principles of human anatomy and physiology in a span of applications. It is proposed that this will promote efficiency and effectiveness across MLE.

The goals of this initiative are highly similar to monetary theory and policy: stable prices and markets, employment. In the case of the AP Money, healthcare goals are also included – a healthy, resilient society.

The proposed actions from this research are oriented towards human capital development, labor economics, and notably, the stable communication capacity of people.

Policy and stimulus would orient towards human capital initiatives through education and incentives

Whereas Friedman and Schwartz used banking data to support their argument for monetary theory, the AP Money argument uses linguistics, anatomy and physiology of human exchange, and the history of the arts and humanities during the Great Depression of 1929 to assert its case.

One strength of science is its ability to mobilize measurement and precision to support discussion, conclusion and action. The research supporting this paper proposes that there is a lag time between the formation of precision sciences and the preceding expression of parallel qualitative concepts in the arts and humanities.

Discrete measures of scientific precision, and material objects, (such as coins) are easy compared to the measurement in systems biology, such as human life cycle health.

As principles and practices of markets and money facilitate the function of society. The assertion of the AP of Money principle contributes to the goal of social flourishing.

### Filling a Critical Gap in Medicine, Law, Economics

A hypothesis is that the societal shock during the Great Depression of 1929 created a stress and trauma impact upon portions of the population. This shock impaired physical human functions, such as the capacity to communicate. This is a health related argument, that stress and trauma can impair multiple layers of human anatomy and physiology (cardiology, immune, Gastrointestinal, muscularkeletal, central nervous system). This can result in impaired cognitive and visceral function.

A specific consequence of stress, shock and trauma is the disruption to the physiology and capacity to communicate. This impairs the capacity to engage in human exchange, market exchange, and productive work.

The banking collapse of 1929 was more than a financial issue. It was a labor and human capital shock. Stress and trauma to real people. Of specific interest, is the impact upon communication physiology.

## Policy and Investment Applications

The implications of this research suggests benefits to health and labor economics, with specific applications to the healthcare industry (prevention), and to the legal and judiciary (reduced burdens in family law and mental health courts). Each supporting benefits to the social economy.

This framework is proposed to guide policy initiatives to support human capital related investments across scale, individuals, families, communities business, industry, and government. It is the foundation for a public health education initiative, which is in development.

## Medicine, Law and Economics Framework

The framework of medicine, law and economics are used in this document to convey an all inclusive role for the information and communication nature of human anatomy and physiology at the root of social economics and society.

The progression of precision measurement systems over time has resulted in excess silos within academia. Precision discipline silos have benefits, yet they lack a coherent systems integration. Such as the principles of a market in economics, which is a systems biology solution.

The academic disciplines and real world practices of medicine, law and economics are like an expansive mansion, a multi-room house. They can be seen as a single unit, arising from a common foundation, with shared walls, honeycombed hallways, interconnected electrical wiring, and an overarching roof.

With the goal of inviting efficiency and effectiveness across this system, this paper explores the common foundation principles of medicine, law and economics (MLE). It proposes a systems biology solution centered upon human anatomy and physiology (AP).

## Proposed Benefits

This research proposes a transdisciplinary solution that can:

Trim life cycle healthcare costs and human suffering.

Reduce legal burdens, especially in family, juvenile, and mental health law and courts,

Support innovation and productivity.

The broad benefits that are proposed are possible given the root solution that is identified.

The proposition of this research is that a common information, communication and relationship model is at the foundation of the disciplines of MLE. This foundation is based in human anatomy and physiology (AP).

### Non obvious Solution

These goals are achievable by addressing a non-obvious principle shared by the disciplines and practices of medicine, law and economics. That they each arise from principles and function of human anatomy and physiology. More so, the clarity of this solution is best seen through the arc of approximately 500 years of Euro-American history, not simply the health and medical anatomy and physiology of the past 150 years.

Cost and consequences of excess silo's across academic disciplines, and specifically within healthcare.

### Progress of Tactics and Arguments in this Treatise

The progress of argumentation in this paper and in further documents will build the following case:

#### Initial Argument:

- A. A conceptual argument. using linguistics.
- B. Present a simple comparison chart of shared concepts across MLE disciplines. (see below) using linguistics and their related concepts to support the argument of a shared information principle across MLE.
- C. This comparison tactic constitutes a broad, transdisciplinary scoping review across MLE.
- D. It is asserted that the linguistics terms and concepts reflect underlying anatomy and physiology that are the common root principles of MLE

### Second Stage: Measurement Science Solution

The transdisciplinary scoping review that drives this proposition asserts that a concept gap exists in the basic sciences at the intersection of physical and biological sciences. This concept gap relates to the role of information in human biology.

See: <https://interogenesis.com/the-principle.html>

### Third Stage: Insights from Arts, Humanities, and Sciences

The scoping review draws from historical Euro-American and global arts, humanities and sciences to propose the AP Money proposal.

### Fourth Stage: Biology and Early Cell Structures (Astrobiology)

The proposal will use examples from biology and early cell structures (origin of life in astrobiology), astrobiology, to identify simple, common structures and mechanisms of action to demonstrate the primacy of information systems in biology, and thus as a foundation for MLE.

A central foundation of the Medicine-Law-Economic argument built upon a biological concept labeled as a 'Somatic Unit of Measurement'. This principle asserts that early biological cell structures constitute a ;Somatic Unit of Measurement. This biological unit of measurement is the foundation of all downstream biology. Which in turn is the foundation of human anatomy and physiology, which underlie the disciplines of medicine, law, and economics.

In addition, astrobiology and 'origin of life' principles relating to the emergence of early cell structures, i.e. the protocell, are integrated into this treatise, as the protocell reflects a simple organized , systems biology, expression of biological 'work, communication ,and measurement expression'.

See: [Interogenesis.com](http://Interogenesis.com)

### Linguistic Concept and Comparison Chart across MLE

By identifying the shared anatomy and physiology of medicine, law and economics, the common underlying biological forces can be identified, and cultivated in society, business and industry.. This can be shaped into a stimulus initiative similar to fiscal and monetary policy – yet, with a strong labor economics and healthcare focus.

This comparison chart is a first draft. It is intentionally rough and raw in its presentation. Not polished. It is a profound work in progress. It is intended to invite conversation, not to be conclusive, or authoritative.

The belief is that this longer unpolished draft is more informative than a shortened cleaner version. The unpolished draft is more expansive and conveys more potential. It points to a vision and is not definitive.

The net intent is to present a framework that illuminates the proposition that across MLE there are similar concepts and terminology that reflect the shared underlying anatomy and physiology.

And these similar concepts and terminology point to common underlying anatomy and physiology

Information, Language, Communication	Medicine /Health	Law	Economics
Life, alive	Humans are alive	Humans are alive	Humans are alive
death	Birth to hospice	Death penalty	?
Art or science? Precision objective; Qualitative subjective.			
Work and forces			
Attention Volition Behaviors	Layer information signaling	Decision Behaviors	choice
AP of relationship	Complicated AP from Conception, birthing to hospice	contracts	transactions
Psychiatry Psychology? Meditation?	Attention regulation, Volition	Letter/spirit of law	Rational economic agent/actor
Etymology	Medicine: To take appropriate measure  Health = wholeness	Law: Indo-European words for “a law” are most commonly from verbs for “to put, place, set, lay, Old English <i>lagu</i> - ordinance, rule prescribed by authority, regulation  Old Norse <i>*lagu</i> “law,” collective plural of <i>lag</i> “layer, measure, stroke,” literally “something laid down, that which is fixed or set.”  Words for “law” in the general sense mostly mean etymologically “what is right” and often are connected with	Economics 1590s, “pertaining to management of a household

		adjectives for “right” (themselves often figurative uses of words for “straight,” “upright,” “true,” “fitting,” or “usage, custom.”)	
			Econ Models eras: Body and birthing Human capital Manufacturing industrial machines Electrical Comm Technology Social technology Vestiges of body, birthing = control the women, birthing  Babies = abundance.
Physical, spatial	The human body, in social relationship in an ecosystem.	The court, public sphere	Transactions, markets
Measurement principles	Internal body systems.  Moderate: relationship AP	Reasoning, text, symbolic, language  Low: visceral contribution?	Price as measurement of value. Data, mathematics  Reasoning, text, symbolic, language  The contribution of the rhetoric of economics.
Systems versus precision			
Symbol Communication , language, work	Profit Motive?	Agreements	Money Valuation Market transaction
Exchange	Scaled, layered, nested	contracts	Exchange, trade, contract Transaction
Regulation	Volitional attention regulation  Involuntary control	Laws	Laws and policies

	systems in the body.		
Agency, resilience	Volition, behavior	responsibility	Agency. actor
	Stress Response	Right / Wrong	Regulation
	Scarcity, alertness response	Scarcity/Abundance	Relative scarcity
	Creativity response		Historic = relative scarcity
Communication and language formation precedes capital formation and market exchange	Physical form Physical body	Formal, Formality	Capital formation
	Cellular Exchange, Signalling	Agreements, contracts	Trade, exchange
Boundary concepts Reflect cell structure	Boundary, personal space, proximity, skin, touch	Boundary, property	Boundary, market
Responsibility	Interoception interogenesis	Rights versus responsibility	agency
Physical boundary	To court: AP of proximity, intimacy, marriage, sex, child birthing. Lower body physiology	Court: a physical space in which something special occurs.	Markets as boundaries  Sports court, basketball, tennis = a physical space.
Skin	Boundary, biology of = skin  Boundary in science and math = material boundary??	Boundary, rules  Formal = Face and Upper body communication  Value of lower body laws.  Wall, fence, garden , court	Boundary = market
Spatial	Garden	Garden // Court? Protect Biological condition	Land, property

Information, Language, Communication	Medicine	Law	Economics
Work: Physical work versus biological work.	Biological work	work	Work, output, productivity  Material work, versus biological work
force	Therapeutic force  Biophysical Charge	Punishment incarceration	Work:  Consumer credit: Charge card. 'to load'
Systems biology:	Biological membranes, Environment	Courts	Currency = flow tool Current = flow Markets
Systems	Biology is an integrated whole system based upon communication systems and a coherent physical boundary	ACA Insurance Markets	Markets = integrated Whole systems based upon shared communication symbols and established boundaries
Responsibility	Legal rights and Biological ability to respond = responsibility	Legal rights	Legal economic rights
	Biological membranes, cellular, skin	Agreements	Market boundaries, geographic boundaries
<b>Objective/subjective</b>			

Information, Language, Communication	Medicine	Law	Economics
Caring	Nurse = nurture, breastfeeding/ top nurse	Societal benefits of the rule of law.	Prosperity
Psycho-physiology			
Scarcity versus abundance			
thriving	Life cycle wellness	Societal benefits of	Prosperity; material

		the Rule of law	and social
Systems	Whole systems; embedded specialized organ systems	Rule of law	Market communication. Markets provide specialization of work.
		<b>Letter law</b> <b>Spirit law</b>	<b>Money</b> <b>price</b>
	Drugs?	Symbols	Money
	language	language	Language
	Face to face	Face to face	Face to face
	Internal biological work		
	circulation	??	Circulation
	Biological Rhythms Nature cycles , agriculture		Business Cycle
	Histamine		
	<b>Physics concept of infinity, Relative scarcity Cellular energy functions</b>	?	<b>Scarcity, relative scarcity, natural resources</b>
		<b>Letter of the law, spirit of the law</b>	
	<b>Homeostasis/conflict</b>	<b>Debate/conflict</b>	<b>Market - invisible hand of supply and demand = communication mechanisms</b>
	<b>Homeostasis = integrative systems/AP</b>	<b>Academic debate</b>	
		<b>Academic Turf war</b>	
		<b>Formal Duel</b>	
	<b>Defensive response HPA, Immune, Etc.</b>	<b>Religious war doctrines</b>	
		<b>Land grab</b>	
		<b>Street fight</b>	
<b>Measurement Precision</b>	<b>Precision medicine</b>		<b>Price</b>



## Summary

This paper presents a step in an argument to create a parallel principle to monetary theory. The tactic of this paper is to identify an element of information theory, specifically the shared anatomy and physiology principles across medicine, law and economic as reflected in linguistic terms and their concepts

A foundation for the AP Money proposal is an assessment of the history of information communication and exchange

Whereas, public and social media buzzes with the news on the latest communication technology, new artificial Intelligence chatbots, cell phone features, social media platforms, and more, less flashy, yet as important , if not more important, are the precursor insights of information, communication, and relationship mechanisms in human biology.

Biology precedes technology. The external technology created by humans (wheels, coins, computers) are a reflection of the innate function of information and communication within the human body.

The fundamental forces of internal human biology which bring us alive are a driving force of society. And, the 4.3 trillion dollar healthcare economy.

Human anatomy and physiology are the formative principles of the disciplines of medicine, law and economics..

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