Astrobiology's Impact upon Academia, Economics, Society.

To: Jon Levin, President, Stanford University
From: Daniel Lappin, Interogenesis Designs; Interogenesis.com
Date: March 17, 2025

President Levin,
Thank you for speaking with me briefly at the Center for Digital Health Symposium, October 29, 2024.. We spoke after your discussion with Fei Fei Li on AI Leadership.. You asked me to reach out to you with further correspondence.

This document is an introduction to this initiative, and an invitation for conversation and collaboration. At the event, we spoke briefly about:

- Underlying anatomy and physiology (A&P) models of Artificial Intelligence.
- Translational astrobiology into an A&P model to extend monetary theory.
- Arts-humanities-sciences (A_H_S) implications across an academic institution.

This document is copied to:
Lloyd Minor, VP for Medical Affairs, Dean of the Medical School
Deborah Cullinan, VP for the Arts
Ellen Oh, Director of Interdisciplinary Arts Programs

Lloyd, Deborah, and Ellen were briefed on this initiative during the opening reception for the wall mural art installation *Rooted in the Land*, by Muwekma Ohlone artist Saif Azzuz at Stanford Research Park, on Oct 2, 2024.. Each expressed interest to further this conversation.

In January, 2025 at the American Economic Association conference, held in San Francisco, I spoke in person with Dr. Adriana D. Kugler, member of the Borad, Board of Governors of the Federal Reserve System. Ms. Kugler also expressed interest in this astrobiology infused economic initiative and requested further information.

In Summary

This initiative is a translation of astrobiology and space sciences using an information theory and scaling law model centered around the early biological protocell model and human anatomy and physiology.

It is an astrobiology infused biomimicry tactic of how nature works. A novel, catalytic A&P model and an undervalued biological force that can be leveraged for academic productivity, science output, health benefits and societal benefits. The proposed solution is a model of integration and translation. Several novel science concepts are proposed that catalyze a broad range of existing elements in scientific research, and arts and humanities history into a systems biology solution.

Primarily. what is lacking is the systems integration and implementation tactic.

Outline of Applications and Benefits

This initiative is a systems biology, arts-humanities-sciences (A-H-S) translational framework:

1. That identifies a systems biology A&P solution across at the core of academic curriculum and life cycle health.
2. Whose benefits are built upon real world case studies (10,000 + hours) in a private, allied health/integrated health professional practice.
3. Is substantiated with a historic review of Euro-American and global A-H-S.
4. Identifies a proposed concept gap in measurement science between biological and physical sciences disciplines. And, proposes a novel unit of measurement to fill this concept gap, and guide implementation of the solutions.
5. Uses a model of astrobiology and the protocell to propose a novel model of A&P that is more reflective of naturally occurring biological forces and structures then is the prevailing model of anatomy and physiology in medicine and healthcare. This new model of A&P supports transdisciplinary integration across the academic span of physical, biological, social sciences and the arts and humanities.
6. Proposes a curriculum of astrobiology STEM/STEAM. With, insight to incorporate helio physics and fusion energy into the astrobiology curriculum, as this can provide additional benefit to economic productivity.. This hypothesizes an integration of nuclear fusion with cellular membrane 'fusion', i.e. protocell formation.
7. Improves research outcomes broadly with a protocell inquiry tactic in all sciences, especially biological, astrobiology and any 'high mystery, uncertain domain, such as rare diseases.
8. Proposes an integration of anatomy A&P principles across the disciplines of medicine-law -economics, with the intent to reduce the burden of family and mental health courts.
    a. See: https://interogenesis.com/references-testimonials.html
    b. See: https://interogenesis.com/images/files/Lappin_Medicine.pdf
9. Proposes a system solution referenced in the LancetJjournal upon the 100th anniversary of the Flexner Report on Medical Education in North America of 1910.
10. Identifies high cost health risks and prevention tactics in the health and wellness life cycle to reduce the societal burdens of illness.

Insights from NASA's SMD, Astrobiology Federation

Recent events within NASA's Science Mission Directorate (SMD), astrobiology division, reflect the rising interest in the transdisciplinary potential and benefits of the discipline of astrobiology. Over the past year, a range of science disciplines within SMD converged to form the Astrobiology Federation. This transdisciplinary group was established to explore how the fundamental principles of astrobiology influence a broad range of related science disciplines.

strobiology is emerging as an organizing principle in space sciences. This suggests Increasing momentum for astrobiology to emerge as an organizing principle across other sciences, biological sciences, and academia.

Given the momentum of media coverage of astrobiology and origin of life themes since the NASA OSIRIS-REx asteroid sample return mission, it is possible that these themes may progress into other aspects of the academic institutions.

This initiative supports that momentum by proposing that an astrobiology, protocell informed model of anatomy and physiology is at the root of the academic disciplines of physical, biological social sciences, and the arts and humanities.

This initiative is translational astrobiology science into social economic benefit.

Parallel to Development of Monetary Theory

It is proposed that this economic stimulus tactic is a parallel concept to monetary theory and policy. (Friedman, Schwatrz).

This is an information theory and scaling law argument, from cellular structures and information exchange, to anatomy and physiology principles, to the underlying A&P of economic concepts.

The example from NASA's SMD, where separate discipline converge around the common theme of astrobiology reflect the basic function of the concept of a market in economic principles. Where, a coordinated communication and exchange system, a market, is established around a physical concept. Traditionally a land based market, now electronic as well, to facilitate exchange. Here the physical organizing principle is astrobiology. Where, the early cell structure, the protocell, is the cellular molecular market of coordination of action and exchange.

As mentioned in our in person conversation, this investigation began in the 1990's with several conversation with Prof. Gary Becker of the university of Chicago. Then a brief conversatoin with Alan Greenspan, former chair of the Board of Governors of the Federal Reserve System (BoG), and Nancy Goodman, SVP of the Chicago Fed, and Co-Chair of the Committee on Public Information (BoG). At the time Ms. Goodman stated that the research we discussed was of interest to the Fed.
(See : https://interogenesis.com/images/files/Alan-Greenspan.pdf

Since 2010, I have had intermittent conversation with Prof James Heckman of the University of Chicago, (Nobel Laureate, Economics, 2000). Professor Heckman has offered that I use his name as a reference when contacting the Fed or the Treasury to present this research.

On a big picture perspective, this is a human capital, labor economic, productivity and innovation initiative, with specific applications to healthcare.
For further reference documents, see:
https://interogenesis.com/references-testimonials.html

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