

# The Four Horsemen of Sustainability: $I = PAT + G$

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Notre Dame 1924



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# The Four Horsemen of the Apocalypse: I = PAT + G

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# Pathway for Resilience Alliance

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- How can we, as members of the Resilience Alliance, make a difference?
- Can we move RA ideas to the center of disciplinary and interdisciplinary discourse?
- Can we focus our efforts on those that are achievable and likely to have a great impact?



# Two Sides of Every Coin

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- It is difficult to get outside of ourselves (sometimes we confuse what we want to be with what we argue must occur)
- The trapdoor nature of perception and interpretation of the empirical world



# My Hypothesis

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- Current thinking focuses on either:
  - Radical changes to the established order
  - Gradual, cumulative changes to the way we do things
- Our efforts may be most effective if directed at subtle changes in communication and action that lead to tipping points.



# Erhlich and Holdren

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$$I = PAT + G$$

I = Impact

P = Population

A = Affluence

T = Technology

G = Governance



# Population

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- Slow population growth or reduce population (demographic transition may be doing this, however unevenly)
- Good trends: empowering women and family planning (contrary to US govt)
- Bad/good trends: smaller family size, greater investment in children, greater environment impact per capita



# Affluence 1

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- Can we reduce and equalize resource use? What would be lost, even if it could be accomplished?





# Affluence 2

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- What role has “overconsumption” played historically?

- Redistribution of accumulated wealth
- Conveyed perception of power/status via monumentality, extravagance, and elaborate performance
- Legitimized transference of power/status



# Technology

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- Maximize information flow  
(Does it help? At what point do we enter gridlock?)
- Reduce energy use, rely on renewable sources, or shift back to human energy?
- How to prevent new technologies from creating unintended negative consequences?



# Governance 1

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- How can we avoid creating unintended constraints, especially those that limit future options?
- How can we create institutions that learn from experience and anticipate changing conditions?
- How can we encourage reciprocal obligations and enrich positive normative values?



# Governance 2

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- How can we maintain identity and local values in the face of globalizing economic forces?
- How can we avoid the tragedy of the commons (especially vis-à-vis our environmental-resource base)?



# Pathway Choices

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1. Should we maximize diversity, flexibility, and redundancy in the system?
2. Can we do away with social/economic hierarchies?
3. Should we empower all stakeholders in the decisionmaking? Equally?
4. Will “thinking globally, acting locally” really solve our problems? Do local solutions really scale-up?





The International Institute  
for Sustainable Futures  
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*...reconciling society's developmental goals with the planet's environmental limits over the long term.*