

URGENTLY NEED A QUANTITATIVE, PREDICTIVE SCIENCE OF CITIES

SCALABILITY

RESILIENCE

EVOLVABILITY

GROWTH

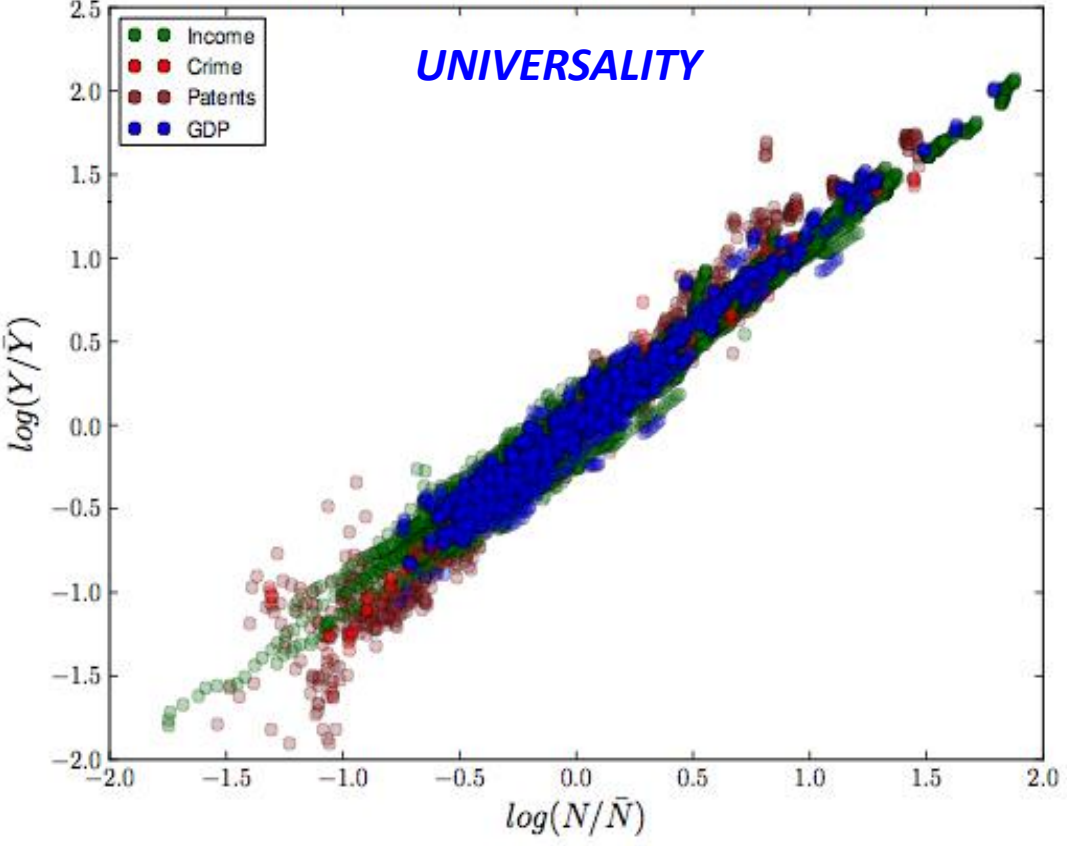
INFRASTRUCTURE

SOCIAL NETWORKS

IS IT CONCEIVABLE?

WHAT CAN WE LEARN FROM BIOLOGY AND PHYSICS?

Collapsed Income, GDP, Crime (binned), and Patents (binned)



“SUPER-LINEAR SCALING”

INCOME CRIME PATENTS GDP DISEASE

SOCIAL NETWORKS CREATIVE PEOPLE

DIVERSITY OF BUSINESSES AND JOBS

THE GOOD, THE BAD & THE UGLY

DOUBLING THE SIZE OF A CITY

ON AVERAGE SYSTEMATICALLY INCREASES

**INCOME, WEALTH, PATENTS, COLLEGES,
CREATIVE PEOPLE, POLICE, AIDS & FLU, CRIME,
SOCIAL INTERACTIONS,.....**

ALL BY APPROXIMATELY 15%

REGARDLESS OF CITY

***AND SAVES APPROXIMATELY 15% ON ALL
INFRASTRUCTURE (ROADS, ELECTRICAL LINES,
GAS STATIONS,.....)***



UNBOUNDED GROWTH REQUIRES **ACCELERATING** CYCLES OF INNOVATION TO AVOID COLLAPSE

