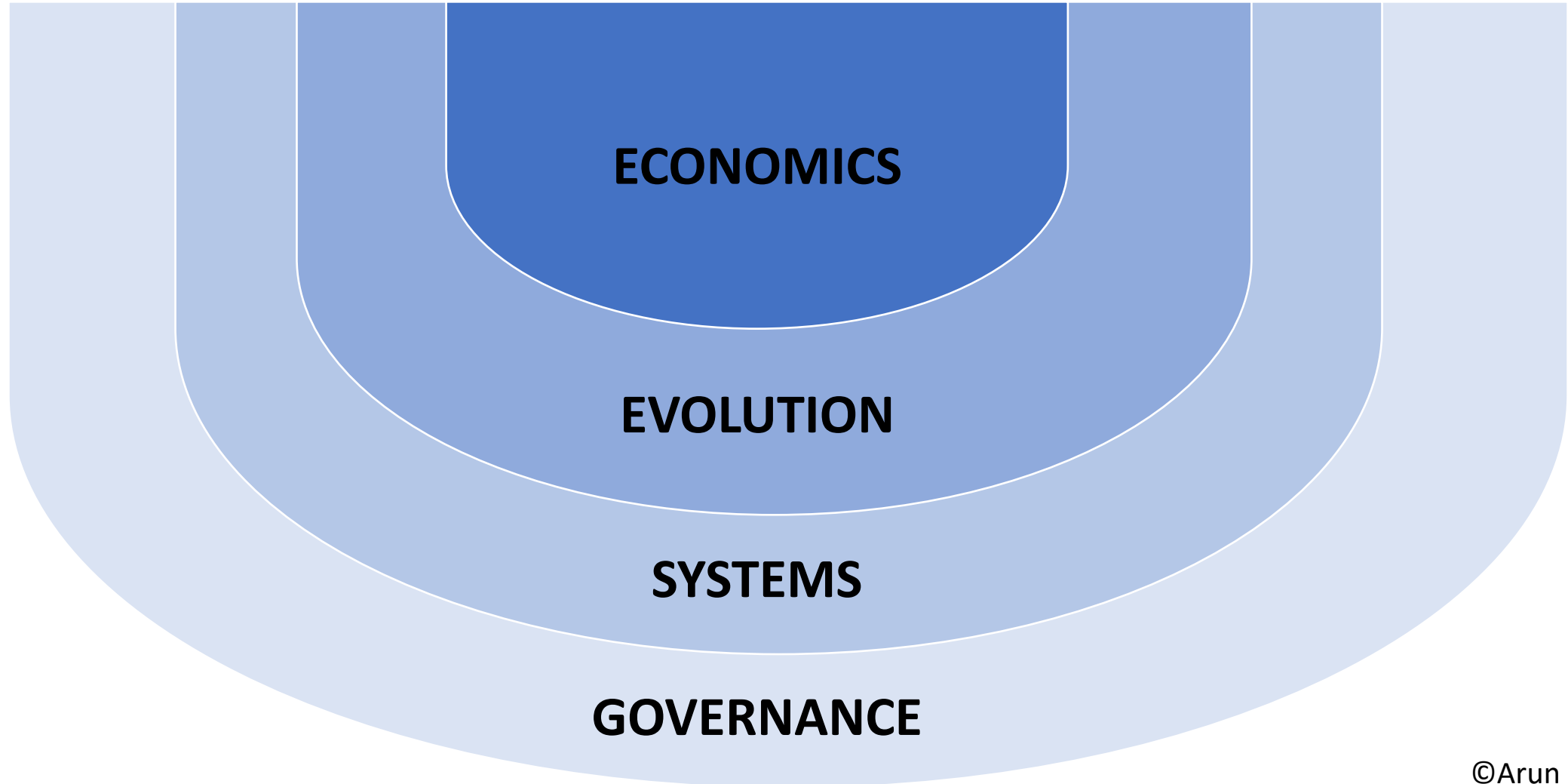


A NEW SCIENCE FOR GLOBAL GOVERNANCE

ARUN MAIRA

SCIENTIFIC PARADIGMS



“If economics is a science—and it is not clear as it used to be what that is—it is evidently a science whose powers of prediction and control are limited, largely because the phenomena it seeks to explain are subject to persistent change and often for reasons that may lie outside the traditional boundaries of the discipline.

What we need is not a new orthodoxy on scope and method but a readiness to listen seriously to our colleagues who take opposing views on fundamental principles and to admit to the natural scientists, or the politicians, or the students, who are crying out for economic truth, that the right answers are unlikely to come from any pure economic dogma.”

-Phyllis Deane, “The Scope and Method of Economic Science”,
Economic Journal 93, 1983

ECONOMICS SCIENCE

The Fork in the Road in the 20th Century

METHODS OF HISTORY

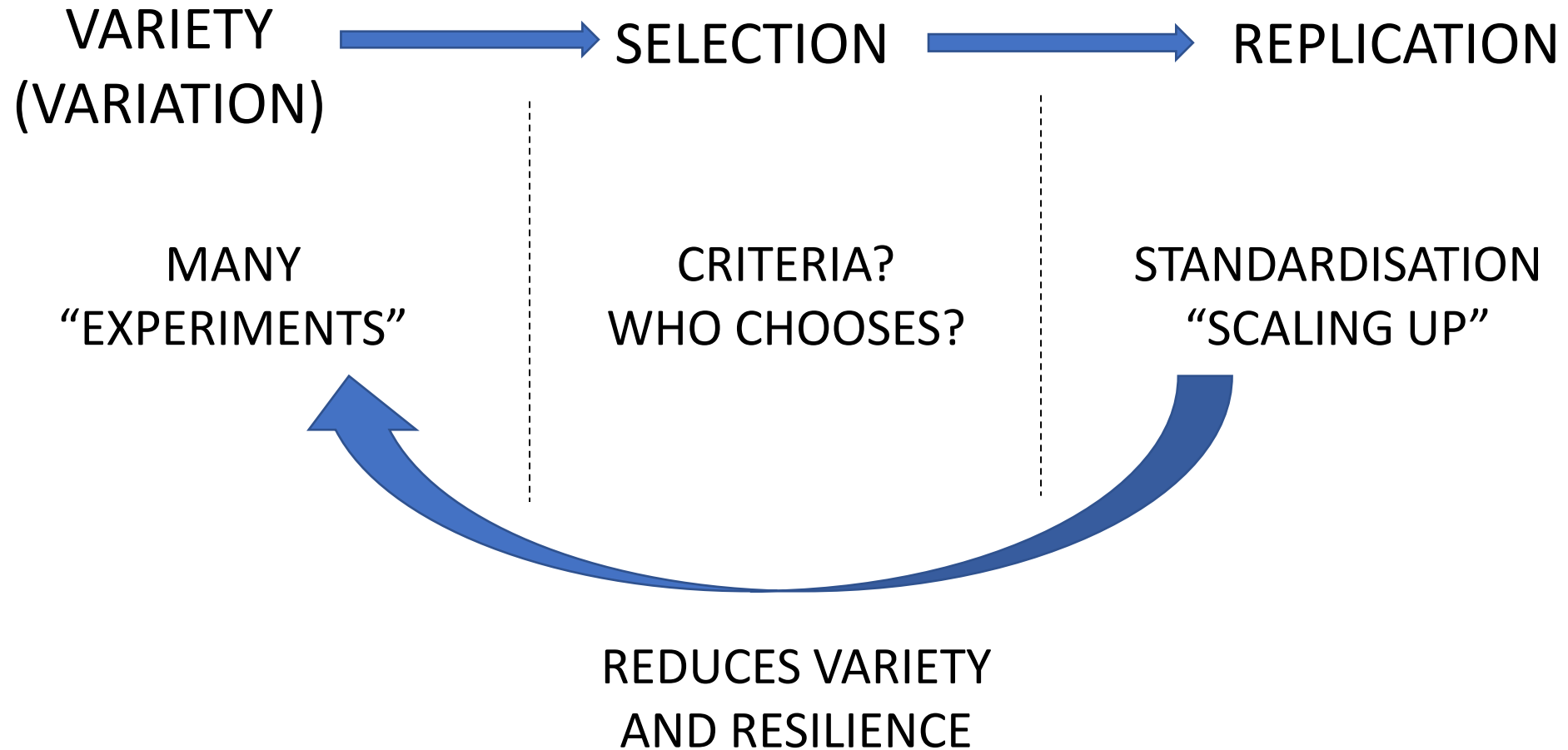
CONTEXT
EVOLUTION
DIVERSITY
COMPLEXITY



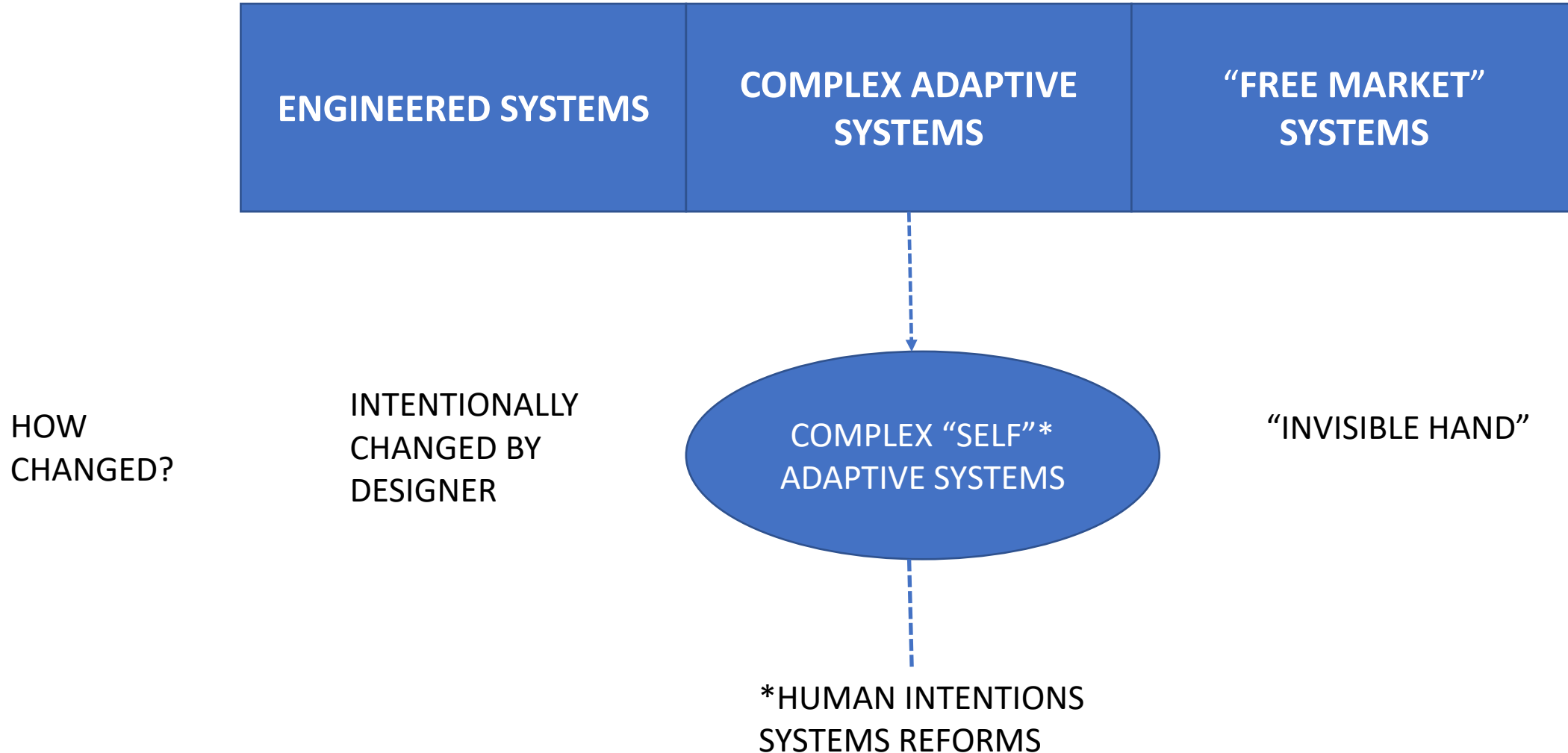
METHODS OF PHYSICS

UNIVERSALITY
PREDICTABILITY
MATHEMATICAL
PRECISION

WHEN THE BEST CAN KILL THE REST



SYSTEMS “ON EDGE”



COMPONENTS OF COMPLEX SELF ADAPTIVE SYSTEMS

ORGANISATION	RESOURCES	PROCESS	GOALS
PERMEABLE BOUNDARIES	FLEXIBLE ARCHITECTURE	MINIMUM CRITICAL RULES	ASPIRATIONS ALIGNED
Open/closed Systems	<ul style="list-style-type: none"> • Requisite variety • Adequate redundancy • Latent valency 	Learning and unlearning	
<ul style="list-style-type: none"> • UNITS (VERTICALS/SILOS) • PERFORMANCE MANAGEMENT 	<ul style="list-style-type: none"> • STANDARDISATION • FULL UTILISATION 	<ul style="list-style-type: none"> • TIGHT CONTROL • NO SURPRISES 	<ul style="list-style-type: none"> • WHAT YOU MEASURE YOU MANAGE • NUMERICALLY MEASURABLE GOALS

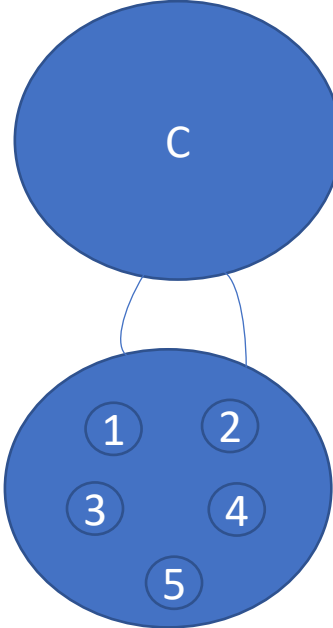
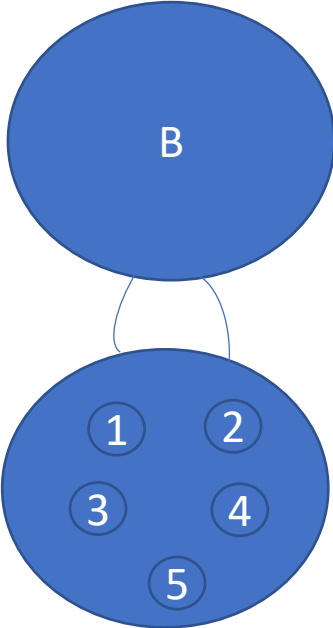
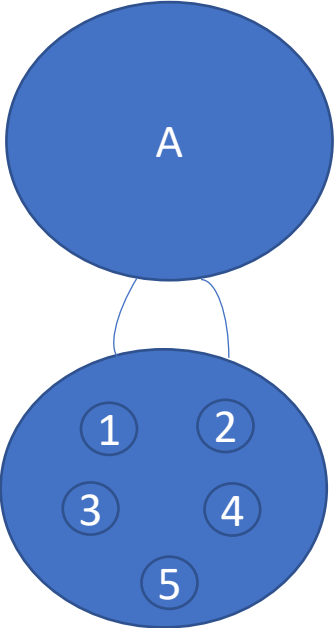
THE MACHINE
MANAGEMENT
PARADIGM

LIMITS OF COMPETITIVE EVOLUTION THEORY FOR GLOBAL GOVERNANCE

MULTI-LEVEL SELECTION

COUNTRY GOVERNANCE (RULES OF THE GAME)

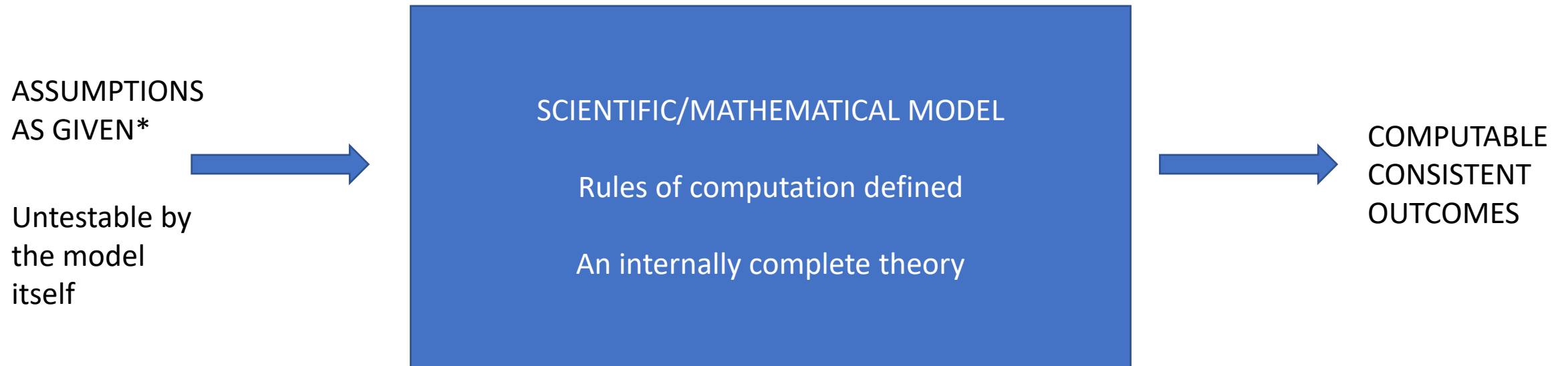
ENTERPRISES WITHIN NATIONS



WHICH COUNTRY SYSTEM IS BEST?
HOW CHOSEN? BY WHOM? WHAT CRITERIA?

THE MOST POWERFUL IMPOSE RULES ON REST
NOT DEMOCRATIC; NOT GOOD FOR GLOBAL RESILIENCE

“INCOMPLETENESS” OF SCIENTIFIC/MATHEMATICAL MODELS



*E.G. HUMANS-RATIONAL; SELFISH; UTILITY MAXIMIZING

“IMPOSSIBILITY” OF MATHEMATICALLY DEFINING COLLECTIVE HUMAN ASPIRATIONS

- SOCIAL CHOICE/ARROW’S IMPOSSIBILITY THEOREM
- WEIGHTAGES TO DIFFERENT VALUES
- ALIGNING UNQUANTIFIABLE QUALITIES
- MAINTAINING DIVERSITY FOR RESILIENCE AND SUSTAINABILITY OF SYSTEM

LISTENING TO “PEOPLE NOT LIKE US.”