

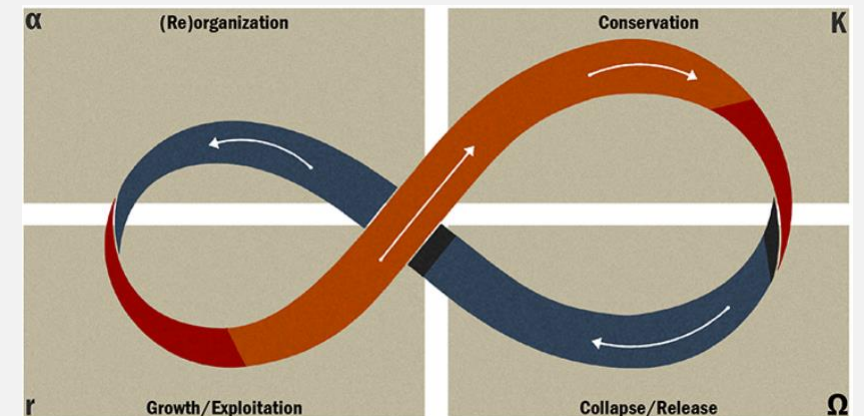
SUSTAINABILITY SCIENCE AS A GROWING
FIELD OF SCHOLARSHIP

SOCIAL-ENVIRONMENTAL THEORY???

- *Systems of explanatory ideas*—**theory**—is critical to understanding and for directing research.
 - SES theory remains weak in construction and testing.
- Recognizing
 - complex adaptive systems
 - linking physical quantity & price
 - locational distinctions = “place based” solutions
- do not negate the existence of common processes & general cause-consequence interactions conducive to theory.
 - Where do we stand?

GENERAL SYSTEMS

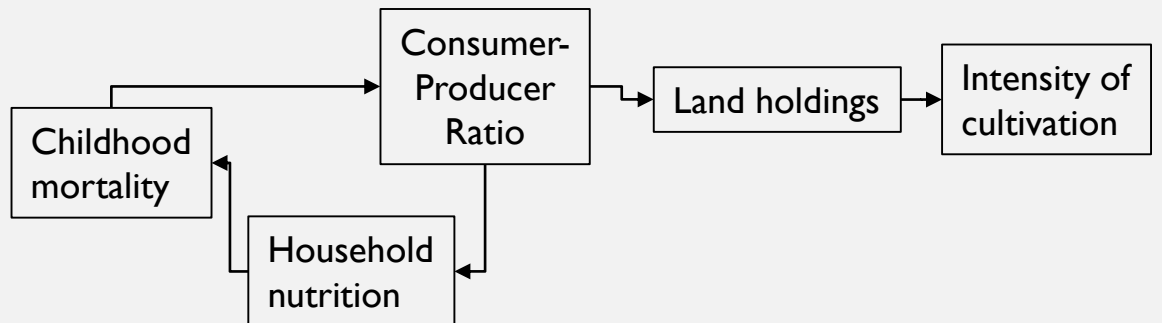
- General system approaches → broad dynamics of system cycling.
- Do not necessarily explain phenomena, events, and processes operating in SESs central to sustainable development queries.



INDIVIDUAL THEORIES

- Theories explaining specific events, phenomena, or processes – theories of the middle range.
- Disciplinary/research field focused.
- Exclusionary in kind, focusing of a few elements (variables) operating in SESs.

Chayanov's explanation of agricultural intensification



SES THEORY MAY DIFFER

- Sustainability science recognizes multiple, interacting social & environmental elements (variables).
- Inclusionary: consider full range of elements at play to move from coupling social & environmental theories to integrative theory.
 - “the range” and complexity so large favors *theory sets*
 - “level of aggregation” required to integrate theory sets

