1) Importance of shared understandings:

WISDOM: *knowing what to overlook*

William James

KNOWLEDGE: *the cognizance one existence takes of another*

George Santayana

INFORMATION: *Data ordered for a purpose*

DATA: *Perceptual stimuli*

2) Openness to other's ways of thinking and working:

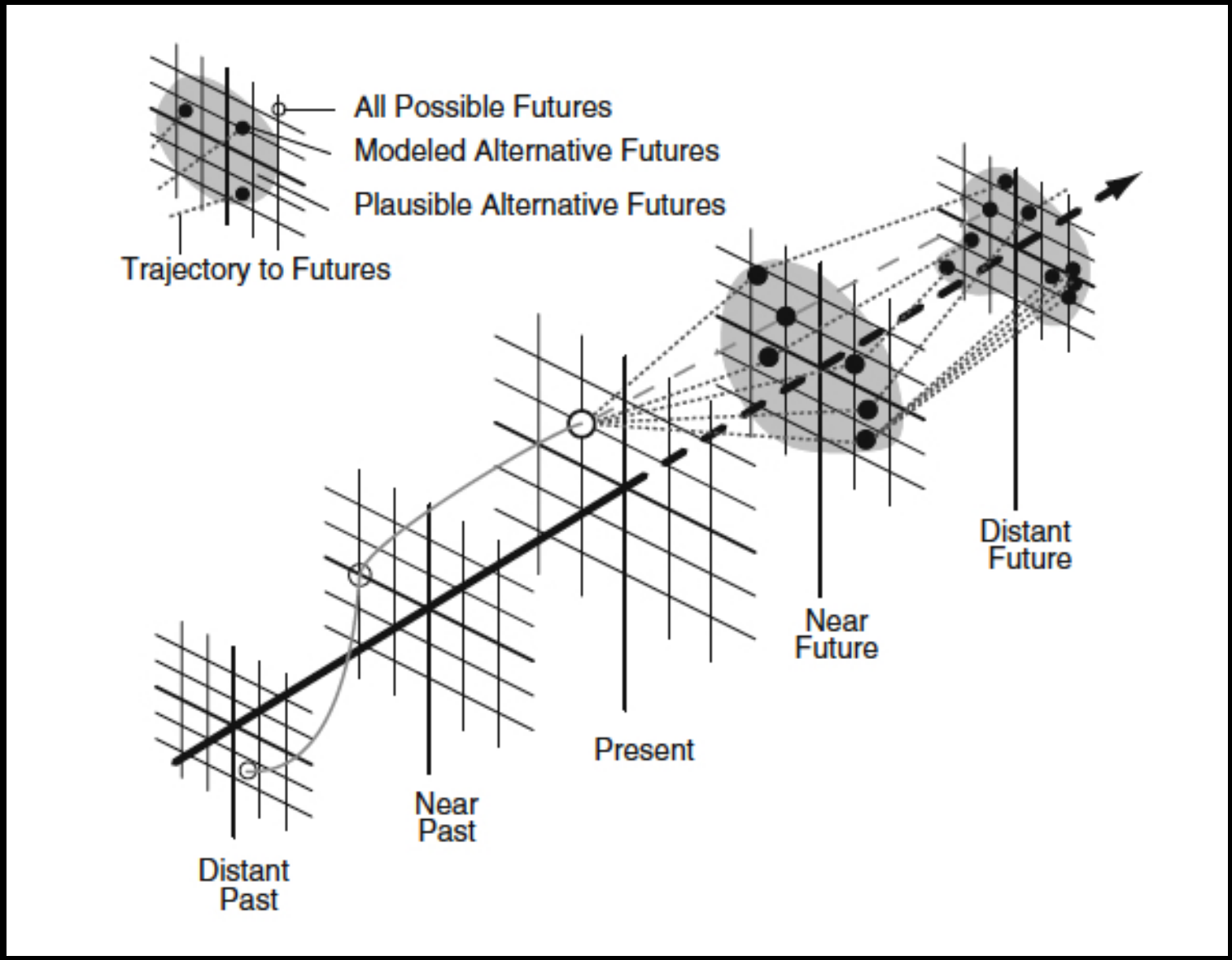
Small number systems: ex. billiard balls on a pool table, planets in the solar system; useful system characterizations and predictions can be made focusing on pair-wise interactions…example analytic approach: Newtonian celestial mechanics.

Medium number systems: ex. most social-ecological systems of interest, (e.g. landscapes, cities, neighborhoods); too many components to treat analytically as small number systems, too few to treat as large number systems – inherent system complexity, often structured hierarchically, leads to deep uncertainty regarding future system behavior and performance…example analytic approach: probabilistic simulation modeling.

Large number systems: ex. gas molecules in this room, population of the U.S.; useful system characterizations and predictions can be made focusing on central tendencies, averages…example analytic approach: statistical predictions of behavior of a gas under changing temperature or pressure.

With appreciation to: O'Neill, R.V., D. L. DeAngelis, J.B. Waide and T.F.H. Allen. 1986. A hierarchical concept of ecosystems . Princeton Univ. Press.

3) Frameworks for synthesis: Trajectories of Change and Alternative Future Scenarios



Source: Hulse, D., A. Branscomb, C. Enright, J. Bolte. 2009 Anticipating floodplain trajectories through alternative futures analysis. Landscape Ecology. (24):8 pp. 1067-1090.DOI:10.1007/s10980-008-9255-2.

4) A basis for resilient futures should:

a) Speak to purposes, directly addressing fundamental processes the futures seek to sustain;
b) Be clear enough for all sorts of people to understand;
c) Honestly acknowledge the consequences of achieving desired future conditions, which requires evaluating landscape state and process together as they co-vary over a specified span of time and space;
d) Be humble and pragmatic, helping steer choices when data, information and knowledge are incomplete.

With appreciation to: Lynch, K. . 1981. A Theory of Good City Form . MIT Press, ISBN: 9780262120852.