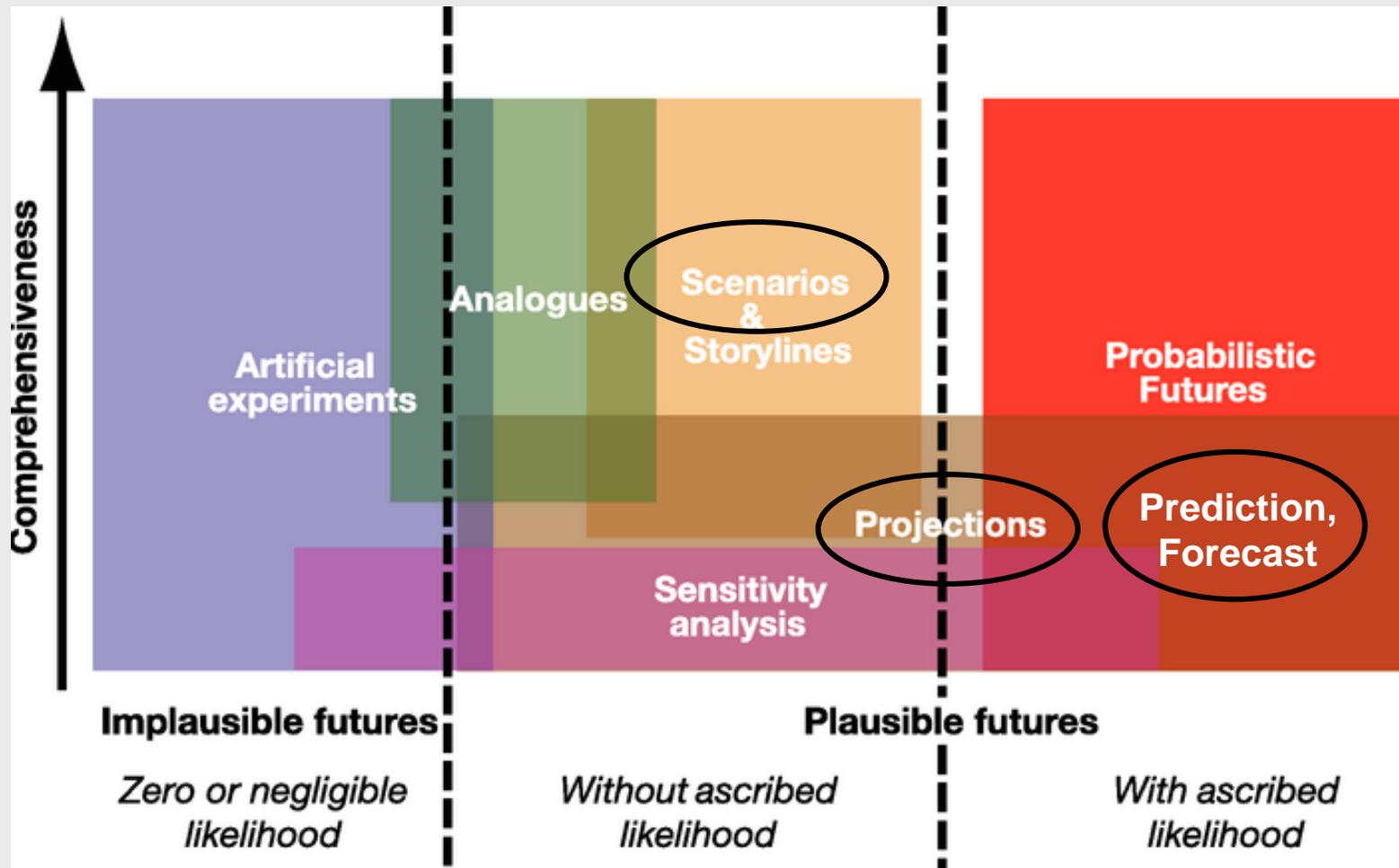


# Projections, scenarios, and their relation

Brian O'Neill  
NCAR

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# Characterizations of the future



## **Projection.**

A projection is generally regarded as any description of the future and the pathway leading to it.

However, here we define a projection as a model-derived estimate of future conditions related to one element of an integrated system (e.g., an emission, a climate, or an economic growth projection).

Projections are generally less comprehensive than scenarios, even if the projected element is influenced by other elements.

In addition, projections may be probabilistic, while scenarios do not ascribe likelihoods.

# Scenarios.

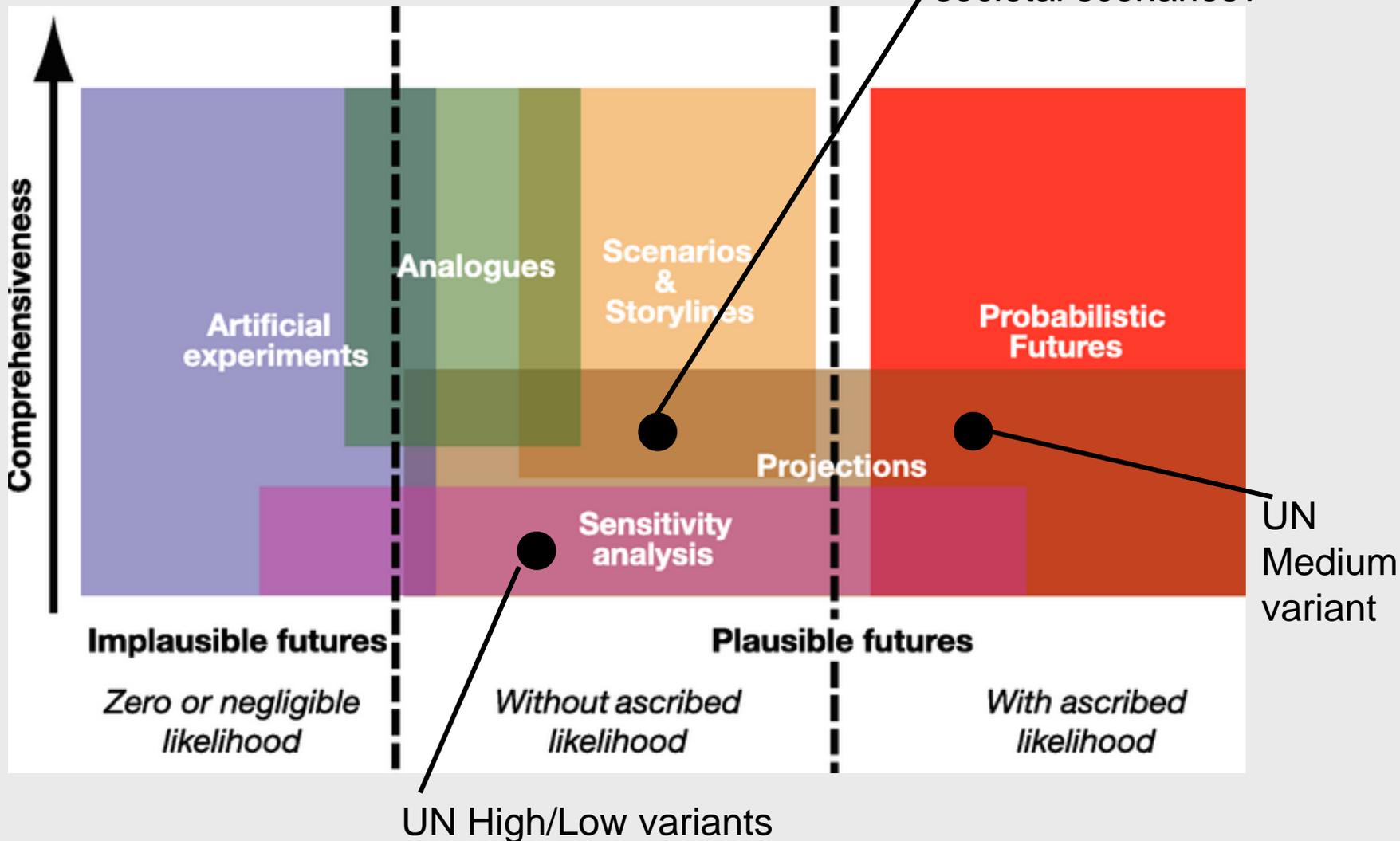
A scenario is a coherent, internally consistent, and plausible description of a possible future state of the world.

Scenarios are not predictions or forecasts (which indicate outcomes considered most likely), but are alternative images without ascribed likelihoods of how the future might unfold.

They may be qualitative, quantitative, or both.

An overarching logic often relates several components of a scenario, for example a storyline and/or projections of particular elements of a system.

# Characterizations of the future



# Storyline for SSP3: Regional Rivalry

## Sketch:

Growing **interest in regional identity** and **concerns about competitiveness and security** push countries to increasingly focus on domestic or, at most, regional issues. This trend is reinforced by the limited number of comparatively **weak global institutions**, with uneven coordination and cooperation for addressing environmental concerns. Policies shift over time to become increasingly oriented toward security, including **barriers to trade**, particularly in the energy resource and agricultural markets. Countries focus on achieving **energy and food security goals** within their own regions at the expense of broader-based development, and in many cases move toward more authoritarian forms of government with highly regulated economies. **Investments in education and technological development decline. Economic development is slow**, consumption is material-intensive, and **inequalities persist or worsen over time**, especially in developing countries. ... **etc.**

# Storyline for SSP3: Regional Rivalry

## Population and urbanization:

Overall, **global population growth is high as a result of the low education trends, slow economic development, and stalled demographic transitions, particularly in developing countries.** At the same time, mortality rates are high in developing countries, with many children dying from preventable diseases (malnutrition, diarrheal disease, malaria). **In high-income countries, economic uncertainty leads to low fertility.** Combined with **low levels of international migration**, this leads to rapid aging in industrialized countries. **Urbanization is slow in all regions**, due to slow economic growth that limits employment opportunities in urban areas, low international migration, and development patterns that make urban areas unattractive destinations for rural populations. However, disadvantaged populations continue to move to poorly planned settlements around large urban areas, particularly in low-income countries, often in places that are particularly vulnerable to extreme weather and climate events.

Which cells are feasible, given goal of producing a projection (NOT prediction) consistent with a given storyline of societal change?

	Geographic resolution			
Pop. Characteristic	National	State	County	Grid cell
Size				
Age/sex				
Race/ethnicity				
Urban/rural				
Education				
Health status				
Income				

