



Prediction and Policy

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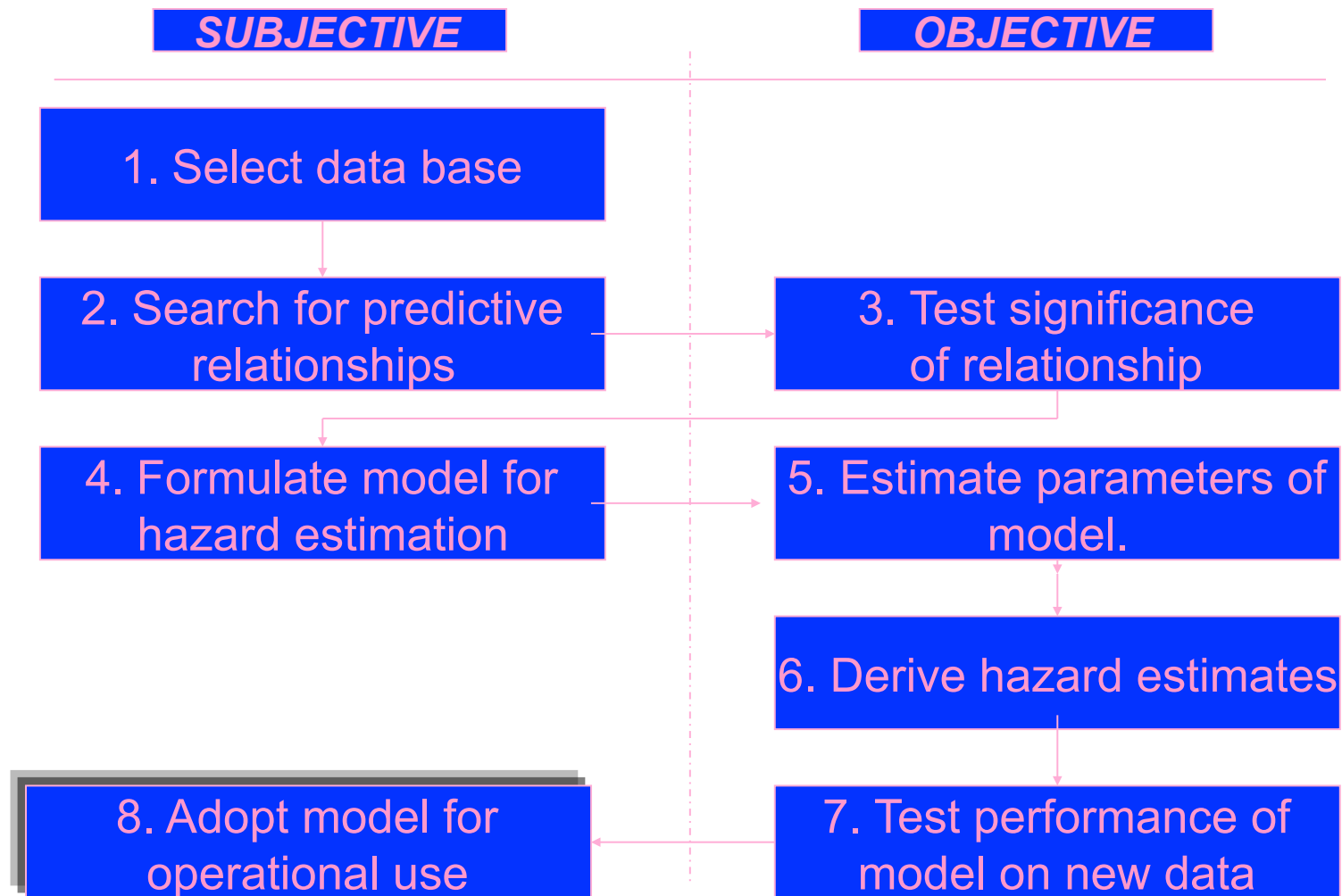
Consensus

- Prediction would be great
- Testing is important
- Probabilities are important
- Responsibility for public action rests on public officials.
- Operational earthquake forecasting is much needed
- Problems
 - Probabilities are low
 - International problem, national decision making
 - There will be failures

What we have now

- Urgent need for actionable information
- Wide mix of views on prediction; credibility problem
- Thousands of predictions with mixed qualifications
- Many proposed precursors:
- Vetted probability estimates:
 - Working Group on California Earthquake Probabilities, UCERF
 - “National hazard maps”
 - STEP
- Some prospective testing: M8, CSEP
 - No present use in policy or emergency response

Scheme for earthquake prediction research Rhoades and Evison 1986



Proposed steps

- CSEP: Articulate guidelines and template for prospective tests of prediction phenomena: location, time, magnitude, test area, termination of prediction, etc.
- NEPEC, CEPEC:
 - Review and approve guidelines
 - Write guidelines for less developed hypotheses
- Predictors:
 - Evaluate precursor methods on Evison-Rhoades pathway
 - Agree on best-developed test case and fill in template
- CSEP: review filled template, provide null hypothesis, design prospective test