

A Political Science Methodology Working Plan

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- in <http://www.researchmethods.org/workingpapers.htm>

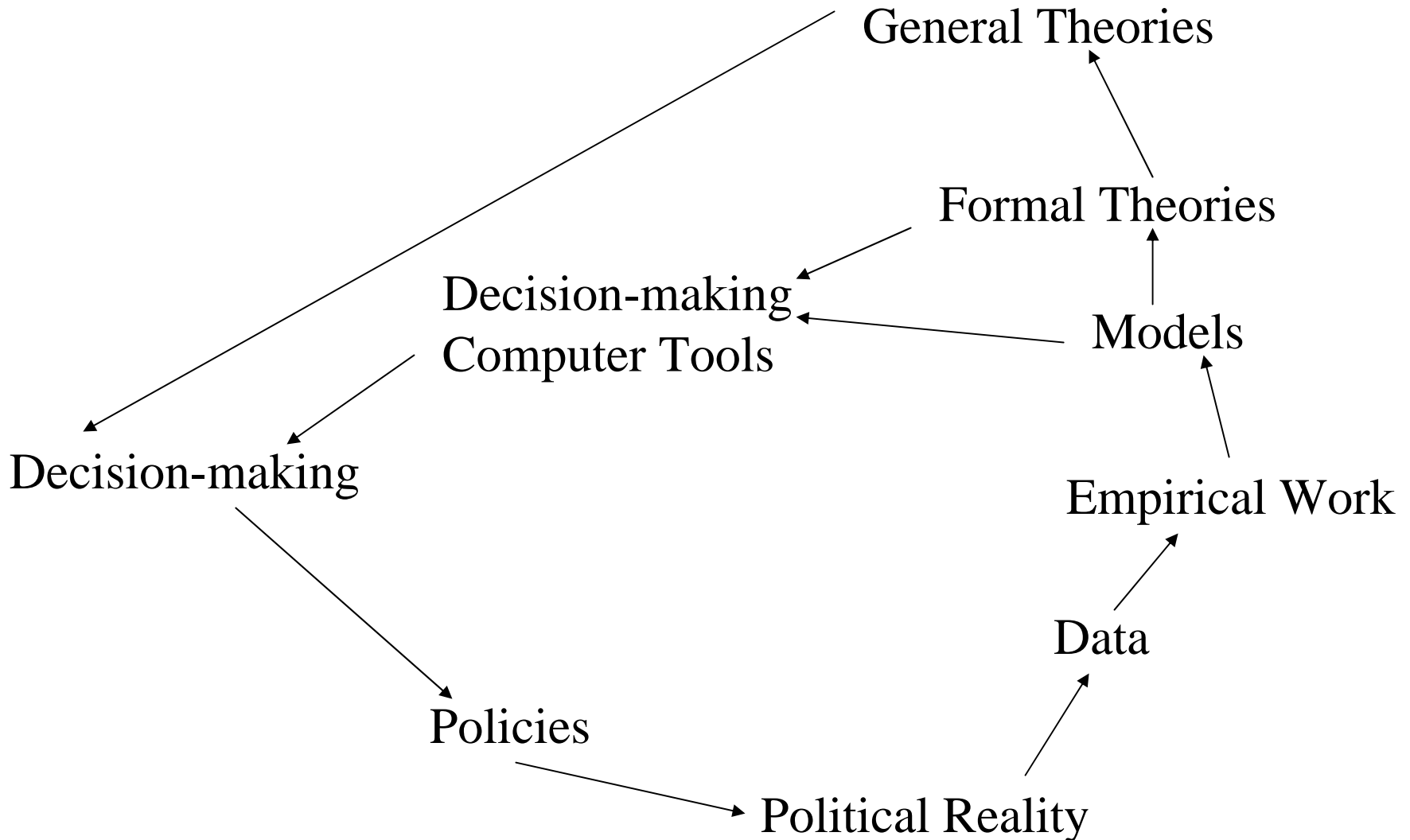
Problems in Political Science

- Gap between theories and empirical work
- Gap between empirical work and decision-making
- Empirical results are piling up, but not be used for theory-building and decision-making
- See Political Science Program of the National Science Foundation, 2002 Empirical Implications of Theoretical Models Report, in http://www.nsf.gov/sbe/ses/polisci/eitm_report/pdf/eitmreport.pdf

Causes of the problem

- Scientific deduction power (mathematics, logic and computer technology – the key to modern social progression) has not be used in theory-building and decision-making. Many software tools are available for empirical work, but almost none for theory-building and decision-making.
- Political science scholars are confused by the relationship among theories, models, empirical research, data and application.
- Political science scholars do not have enough training in mathematics and computer technology.

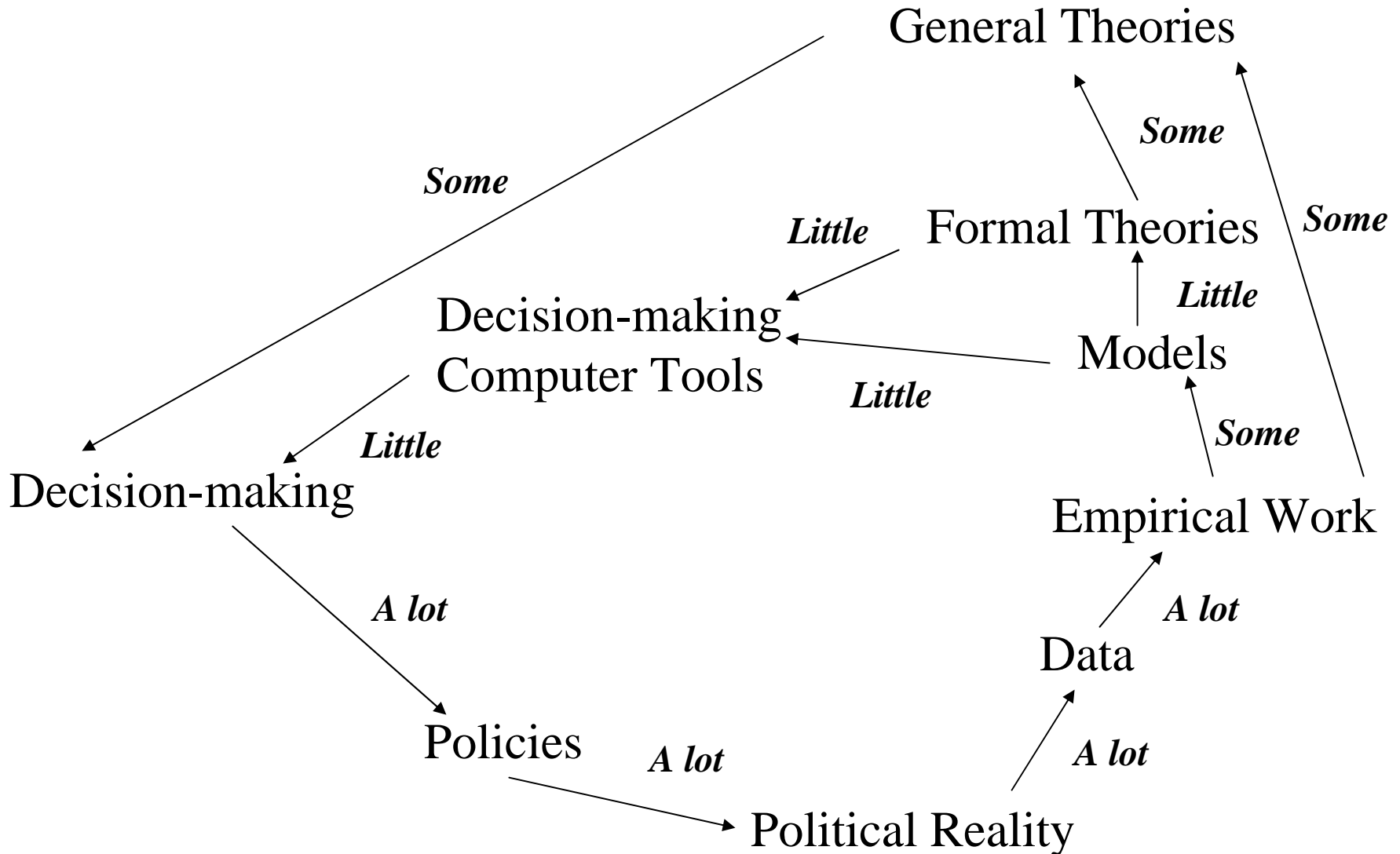
The Scientific Research Structure



Brief Definitions

- **General theories** – a well organized and logical set of concepts and propositions presented in natural language, like those of Locke and Dahl
- **Formal theories** – presented in mathematical or formal logical terms
- **Models** – abstract models – a set of mathematical formulas like regression models as the most common used ones
- **Empirical work** – mostly statistical analysis of some datasets
- **Data** – mostly survey data
- **Decision-making tools** – software tools used to derive decisions and to evaluate risks -- many are available, but not much used in political fields

The Current Situation in Pol Sci



The Challenges

- Bridge the gap between empirical work and formal theories
- Bridge the gap between formal theories and decision-making technology
- Bridge the gap between decision-making technology and applications

Tasks

- Develop decision-making support software for politics and public administration
- Develop knowledge representation software for building political formal theories