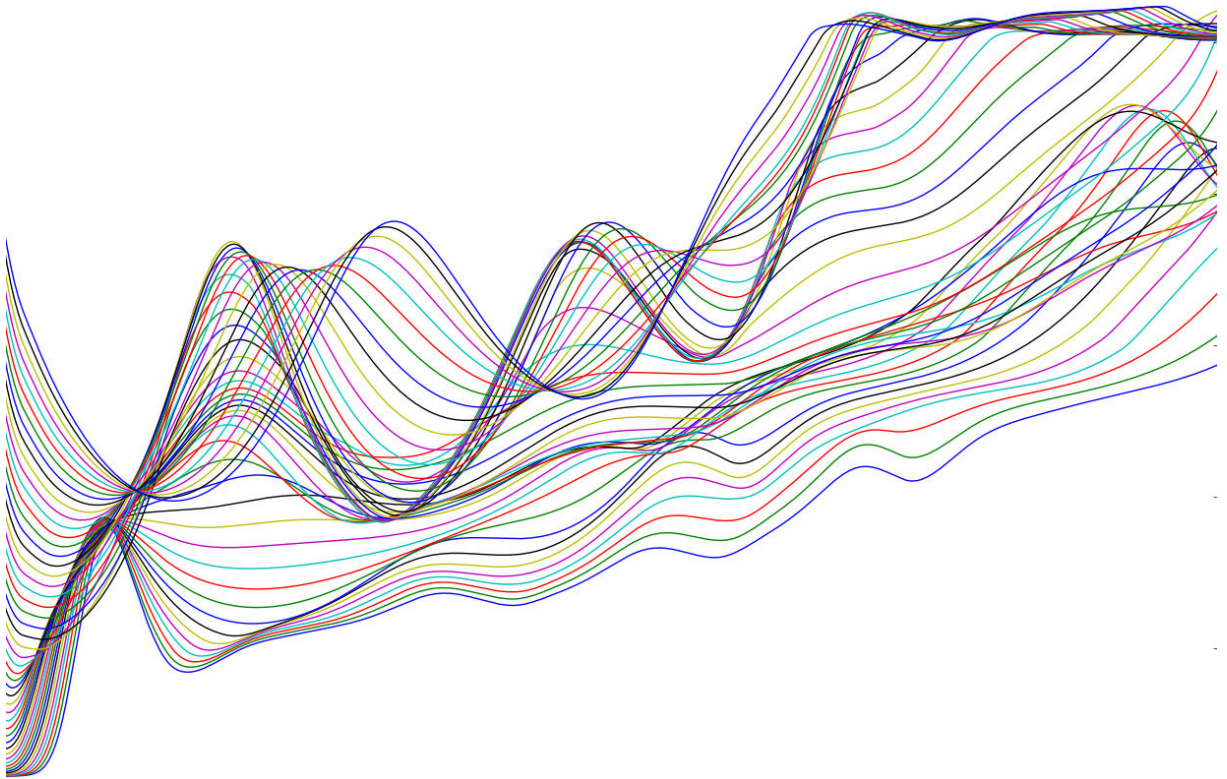
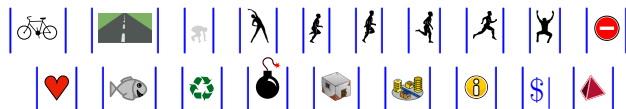


Small System Dynamics Models  
for Big Issues

*Triple Jump towards Real-World Dynamic Complexity*



Erik Pruyt



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Cover and back cover image: sensitivity analysis using the EMA workbench and Vensim DSS of a slightly extended version of model [14.15](#)

Picture on page [29](#): FloorFoto

## Bull's-Eye Diagrams

Bull's eye diagrams provide a general overview of the elements modeled endogenously, of the elements modeled exogenously, and of all elements that were deliberately omitted. Moreover, bull's eye diagrams allow others to identify unintentional omissions at a glance. The bull's eye diagram in Figure 1.5 shows for example in a very simple way what is (to different degrees) included in, and deliberately omitted from, a rather large and complex simulation model of the technological battle in the European electrical power sector (see (Pruyt 2007a; Pruyt 2007b)).

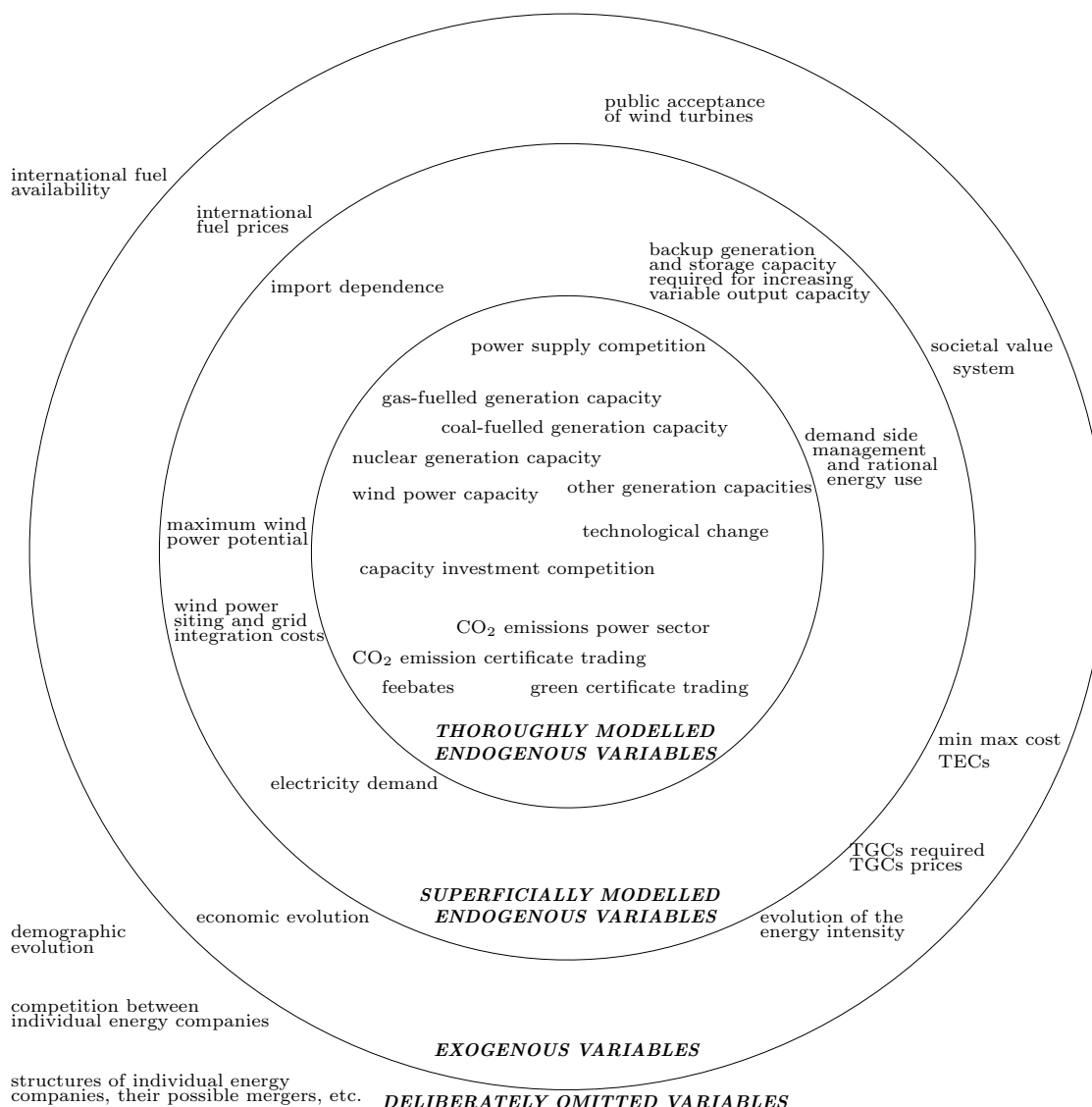


Figure 1.5: Example of a bull's eye diagram: What is missing?

## Sector Diagrams

Sector Diagrams are aggregated diagrams that focus on the main sectors/clusters/submodels and the main relations between them, not on the relations within each of them. Sector diagrams are ideally suited to provide a big picture overview of issues or systems with sectors/clusters/submodels of variables with many relations between the variables within each of the sectors and few relations with variables in other sectors. Figure 1.6 shows a Sector Diagram of the fight against burglaries and robberies. The corresponding SFD of the model is too detailed to be shown for a big picture overview. And although CLDs can be used to illustrate different effects, such as the waterbed effect between types of high impact crimes or between different regions, for an overview of the whole model they would be too complex.

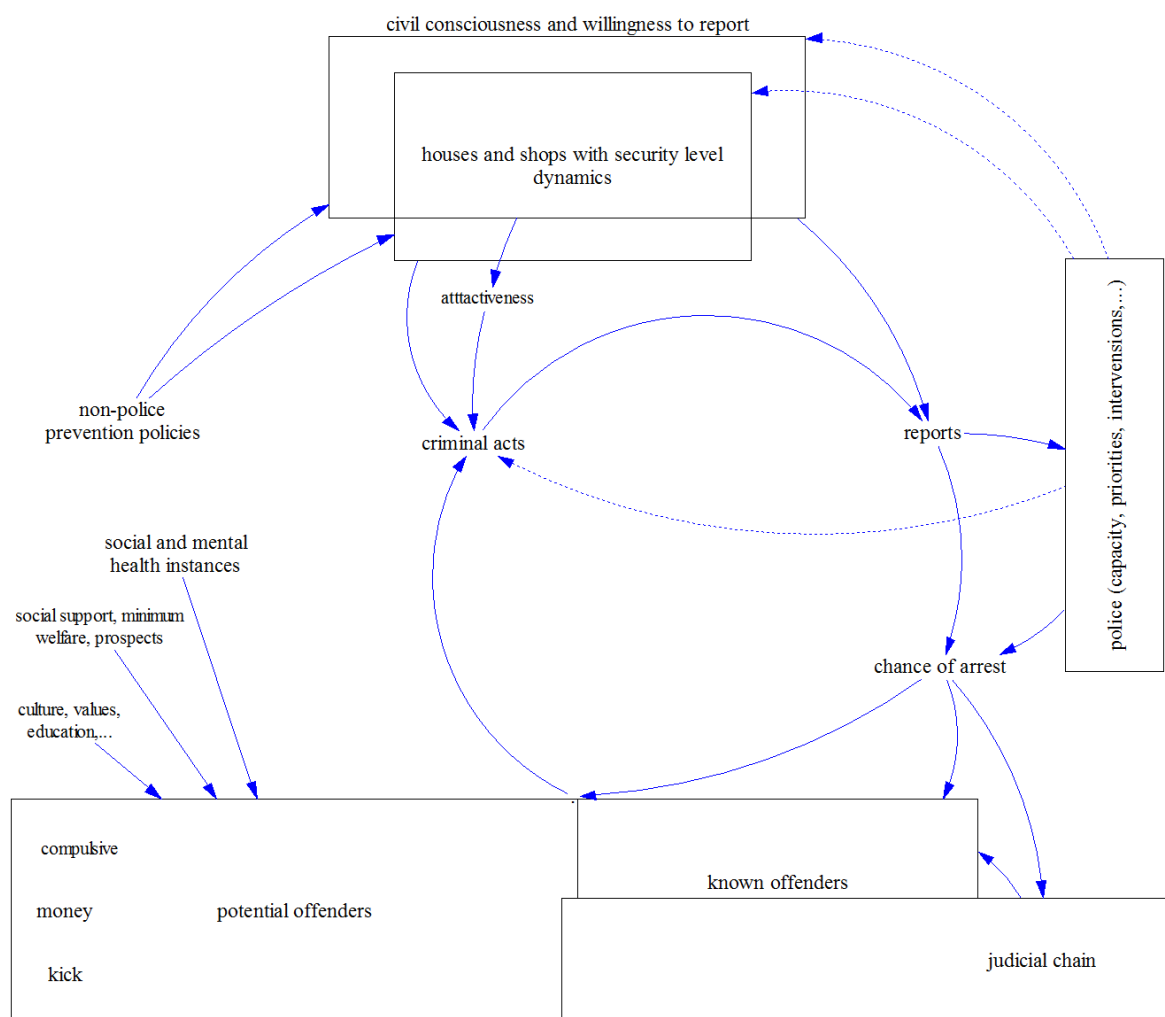


Figure 1.6: Example of a Sector Diagram.

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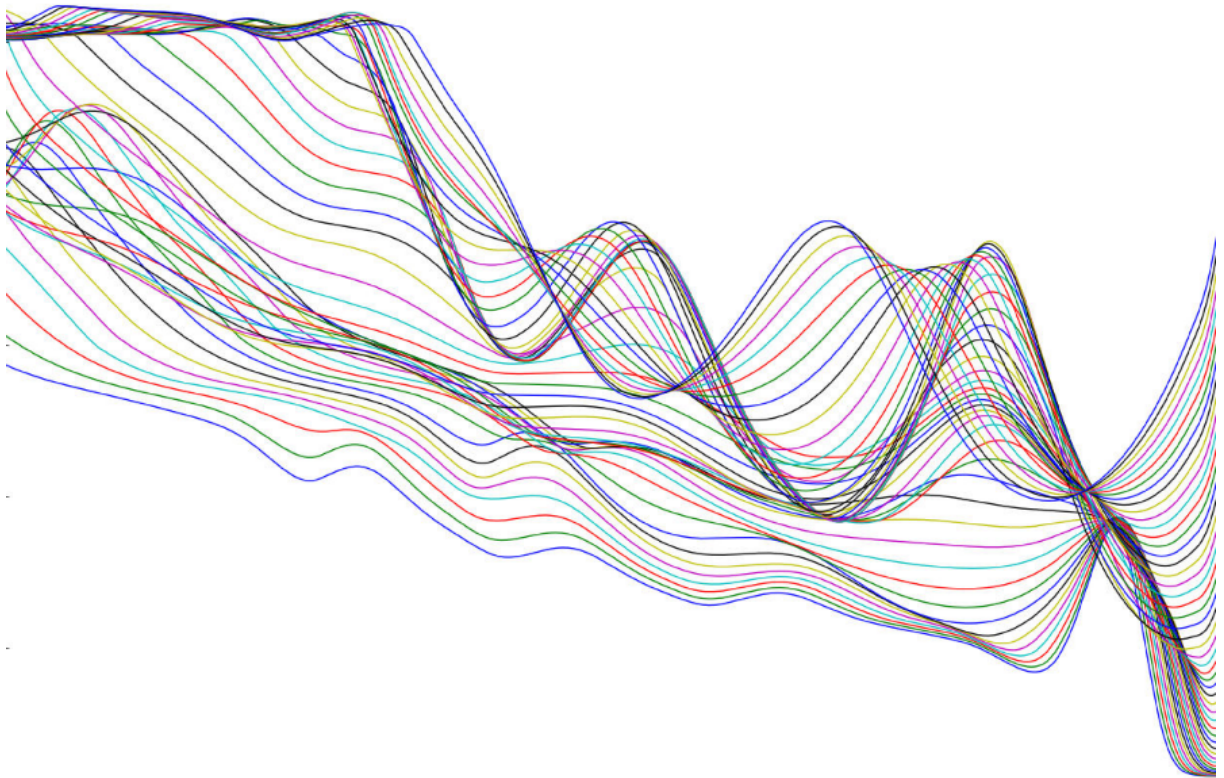
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