

## ~~6.6.1 Hypotheses~~

Jacobs' model of the User/System Interface is the general framework used to guide the research in this project. The model is composed of four classes of variables:

(1) Human Decision maker, (2) Information system, (3) Task, and (4) Performance. The first three classes of variables are treated experimentally as independent variables, and performance variables are dependent variables. The model is too complex to deal with in its entirety in any one study.

Bertin's theory is primarily one of graphic design. The designer selects such a form of information presentation which allows the user to extract the desired information with the least amount of effort. The amount of effort expended in isolating and extracting the information from the presentation is measured by the time required to do so. The operation to be extracted is defined by the question the user wishes to answer. The information to be presented is taken as a given. Bertin describes three levels of questions: (1) Elementary questions require an answer based on one datapoint in the presentation. (2) Intermediate questions require an answer based on more than one, but not all, of datapoints presented. (3) Comprehensive questions require an answer based on all of the information presented. Information sets consist of components (variables) and an invariant the invariant describes the relationships among the variables.