

JAMES A. GRAASKAMP COLLECTION OF TEACHING MATERIALS

V. INDUSTRY SEMINARS AND SPEECHES - SHORT TERM

A. Appraisal Organizations

3. 1970

b. "The Computer and the Appraiser",  
sponsored by the Society of Real Estate  
Appraisers, May 4, 1970

THE COMPUTER AND THE APPRAISER  
Outline of  
A Lecture Presentation  
  
35th Annual Convention  
Society of Real Estate Appraisers  
  
Monday, May 4, 1970

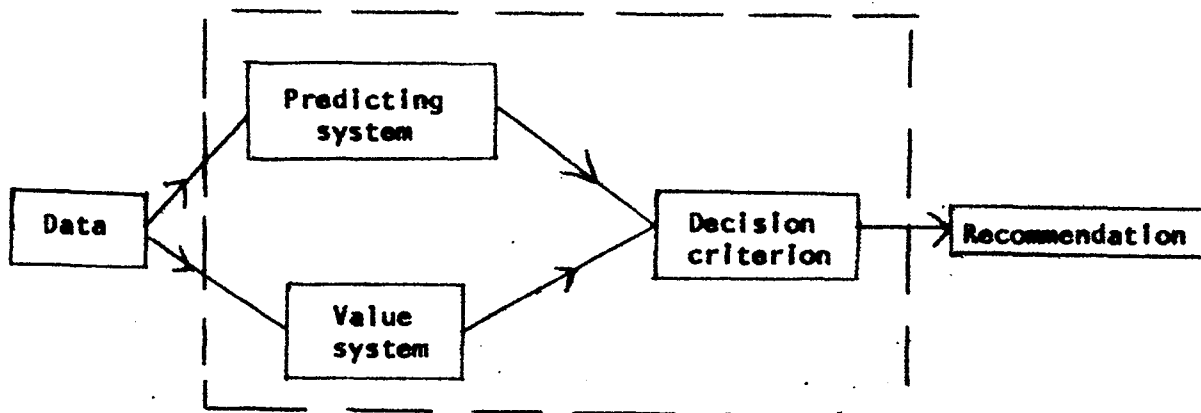
1. Decision-making methods and real estate analysis

- A. Real Estate appraisal or investment counseling is a decision-making function.
  - 1. Appraisal is limited to forecasting probable sales price under specified conditions.
  - 2. Counseling is subjectively involved in measuring subjective values of a course of action for a specified client.
  - 3. Analysis for arriving at a decision is the essence of both functions and has been explicitly recognized in the development of a program designation for everyone as Senior Real Estate Analyst.
- B. Decision-making behavior has obviously undergone significant evolution.
  - 1. Origins of group decision-making and decision specialists are found in devil theories of cause and effect.
  - 2. Origins of systems of logic and reason presumed causes to predict effects.
  - 3. Origins of scientific method and statistical decision-making required identification of causes with observed effects.
- C. Real estate appraisal methods have split origins in the procedure for value decision-making.
  - 1. The cost approach and the income approach at best are decision models of reason and logic - the premise of Marshall's economic man.
  - 2. The cost approach becomes devil theory when observed results of a market sale are presumed to be caused by depreciation to the cost to replace.
- D. The market comparison approach to value has its roots in the scientific method of observing individual events to induce a conclusion with which to deduce a forecast of sale price for the subject property.
- E. To require correlation and synthesis of the three approaches to value is to create a model of real estate decision-making based on Marshall's economic man.
  - 1. Simplifying models are essential to make forecasting of human behavior possible.
  - 2. Model-making is limited by information available and the ability of the forecaster to manipulate the information reliably.

3. The scientific method is concerned with developing models which reflect observed behavior.
- F. Computer techniques provide opportunity to improve professional appraisal decision-making models.
1. A computer is a mechanical device for processing information according to a logical procedure.
  2. The essential question for any computer application is the selection of the logical procedure to be followed.
  3. The choice of procedure can then be fit to the capacity of available men and hardware.
  4. It is the choice of procedure which brings the appraiser face-to-face with the need to understand the nature of his traditional procedures and the current evolution in methods of applying the scientific method to the decision process.

II. A description of scientific method, statistical decisions, and contemporary model building

- A. A description of statistical decision-making fits everyday choices.
- B. Facts must be organized to identify possible alternative outcomes of decision.
- C. The problem of measuring probability of alternative outcomes confuses application.
- D. Problem of measuring desirability of alternative outcomes is easier.
- E. A pictorial representation of the system



- F. The final test of any model is "Does it work?"

G. Model-making is related to creative thinking by analogy.

1. Personal analogy
2. Direct analogy
3. Symbolic analogy
4. Fantasy analogy

H. Three types of scientific model building are common in real estate analysis.

1. Physical models
2. Abstract models
3. Symbolic models

I. Advantages of model building for the real estate analyst.

1. Model provides a preliminary reference for analysis.
2. A model brings into focus the problems of abstraction, to choose factors relevant to problems under consideration.
3. Failure of a model to predict reveals flaws in data or logic.
4. Modeling in symbolic language permits use of mathematical tools.
5. Models often provide the cheapest way to make a prediction as well as the quickest. The gross-rent multiplier technique is an appraisal model.

J. Disadvantages and dangers of model building for the real estate analyst.

1. The danger of abstraction is gross oversimplification and loss of critical data.
2. The problem of relating the model to the complexity of the real world.
3. Infatuation with the model as a product of the intellect rather than as a practical tool.

### III. Practical problems control design of a model procedure for appraisal analysis

- A. Interface between input data and model requirements is a basic constraint.
- B. Interface between output of model and the decision-maker limits techniques.
- C. Interface between model procedures and court and government procedures limits rapid adaptation.
- D. Balancing model-making with data collecting is an evolutionary process.
- E. Interfacing available models with accepted appraisal procedures is necessary for professional acceptance.
- F. A variety of models based on scientific observation are already available which suggest there are more than three approaches to value.