

JAMES A. GRAASKAMP COLLECTION OF TEACHING MATERIALS

V. INDUSTRY SEMINARS AND SPEECHES - SHORT TERM

- I. Other Presentations In Which Either The Date And /
Or Sponsoring Organization Is Missing
2. Appraisal Topics
 - q. "Contemporary Real Estate Appraisal
Methods", no date

CONTEMPORARY REAL ESTATE APPRAISAL METHODS

Instructor: Professor James A. Graaskamp
University of Wisconsin School of Business

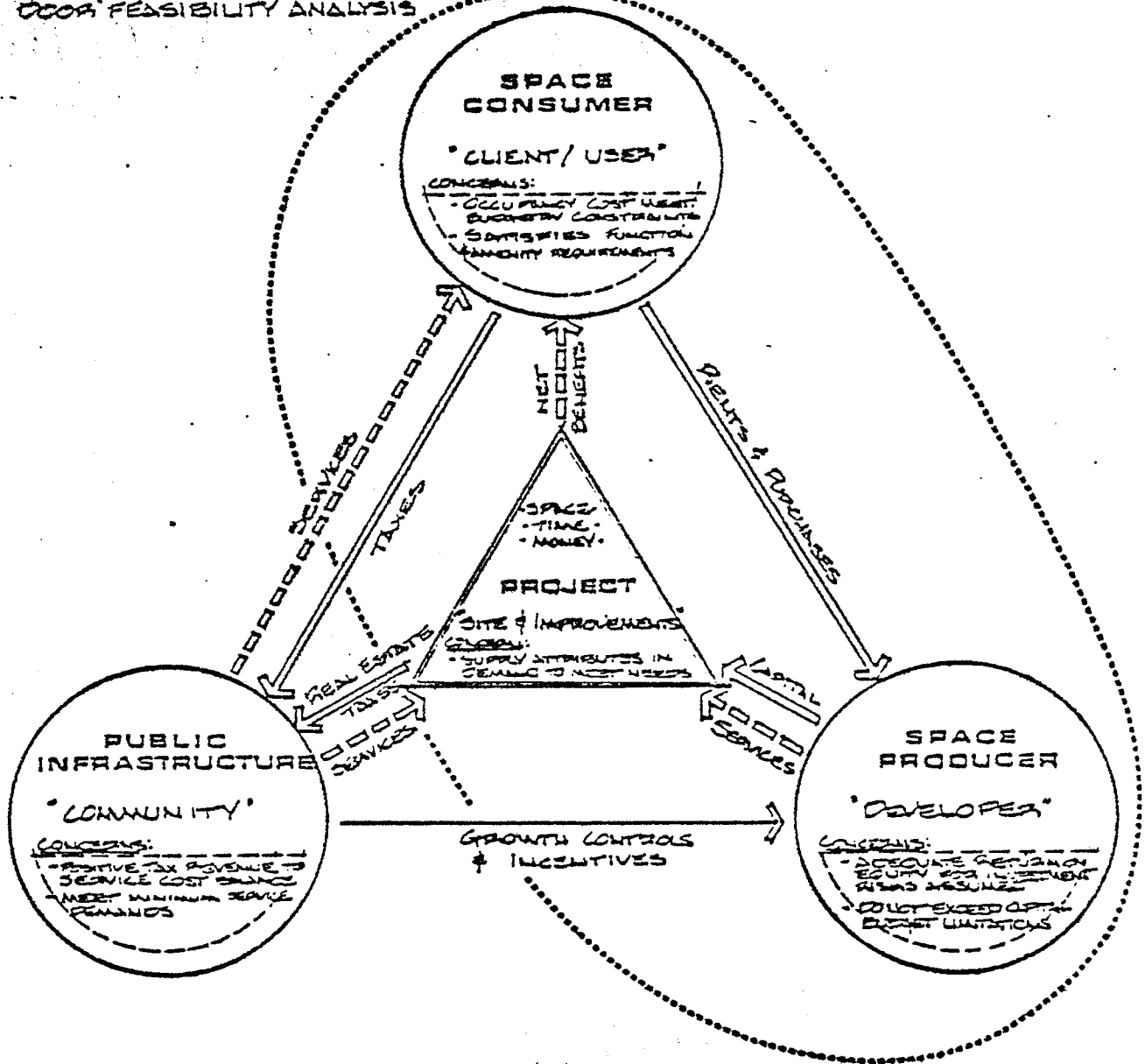
FIRST EVENING
7:00-9:00 P.M.

I. Basic Concepts and Definitions

- A. Real estate is a tangible product - defined as artificially delineated space with a fourth dimension of time referenced to a fixed point on the face of the earth.
1. Real estate is a space-time unit, room per night, apartment per month, square foot per year, tennis court hours, or a condominium for two weeks in January at a ski slope.
 2. To the space-time abstraction can be added special attributes to house some form of activity.
 3. Improvements from survey market to city layouts to structures define space.
 4. Legal contracts and precedents define time.
 5. Rights of use are defined by public values, court opinions.
 6. Private rights to use are those which remain after the public has exercised its rights to control, to tax, or to condemn.
- B. A real estate project is cash-cycle business enterprise which combines a space-time product with certain types of management services to meet the needs of a specific user. It is the process of converting space-time needs to money-time dimensions in a cash economy.
1. A real estate business is any business which provides expertise necessary to relate space-time need to money-time requirements and includes architects, brokers, city planners, mortgage bankers, and all other special skills.
 2. The true profit centers in real estate are in the delivery of services and cash capital.
 3. Equity ownership is the degree to which one enterprise controls or diverts cash from another real estate enterprise.
 4. Public has direct ownership to the degree real estate taxes take a percentage of tenant income in excess of service cost.
 5. Consumer must view space as a total consumption system involving direct cost, surface cost, transportation cost and negative income of risk.
 6. The best real estate project is the one which has the lowest net present value of cost as the sum of cost to the consumer production sector and public sector.

EXHIBIT I

DATA INPUT CONCENTRATION FOR A "FRONT DOOR - BACK DOOR" FEASIBILITY ANALYSIS



THE REAL ESTATE DEVELOPMENT SYSTEM

- C. The real estate process is the dynamic interaction of three groups, space users (consumers), space producers, and the various public agencies (infrastructures) which provide services and capital to support the consumer needs. (See Exhibit 1)
1. Each of these three decision groups represent an enterprise, an organized undertaking. All are cash cycle enterprises constrained by a need for cash solvency, both short and long term.
 2. A desirable real estate solution occurs when the process permits maximum satisfaction to the consumer at a price that he can afford within the environmental limits of land while permitting the consumer, producer, and the government cash cycle to achieve solvency - cash break even at a minimum, after full payment for services rendered.
 3. Solvency of the total process, not value, is the critical issue.
 4. Land is an environmental constraint and not a profit center.
 5. Land provides access to a real estate business opportunity and is not the opportunity itself. Real estate business wants to control land to create a captive market for services.
- D. Land is the point where demand and supply forces find cash solvency. Location is a manufactured attribute. Site attributes are exploited to create location by analyzing:
1. Static attributes.
 2. Legal-political attributes.
 3. Linkage attributes.
 4. Dynamic attributes.
- E. Recognition of the fact that profit maximization must be limited by concerns for physical environment and community priorities for land use has resulted in redefinition of the most basic concept in appraisal; i.e. highest and best use, in the authorized terminology handbook sponsored by the American Institute of Real Estate Appraisers and the Society of Real Estate Appraisers. Compare the 1971 definition with that for 1975:

Highest and best use concept-

"A valuation concept that can be applied to either the land or improvements. It normally is used to mean that use of a parcel of land (without regard to any improvements upon it) that will maximize the owner's wealth by being the most profitable use of the land. The concept of highest and best use can also be applied to a property which has some improvements upon it that have a remaining economic life. In this context, highest and best use can refer to that use of the existing improvements which is most profitable to the owner. It is possible to have two different highest and best uses for the same property: one for the land ignoring the improvements; and another that recognizes the presence of the improvements.:

p. 57, Real Estate Appraisal Principles and Terminology, Second Edition, Society of Real Estate Appraisers 1971.

"Highest and Best Use: That reasonable and probable use that will support the highest present value, as defined, as of the effective date of the appraisal. Alternatively, that use, from among reasonably probable and legal alternative uses, found to be physically possible, appropriately supported, financially feasible, and which results in highest land value. The definition immediately above applies specifically to the highest and best use of land. It is to be recognized that in cases where a site has existing improvements on it, the highest and best use may very well be determined to be different from the existing use. The existing use will continue, however, unless and until land value in its highest and best use exceeds the total value of the property in its existing use. Implied within these definitions is recognition of the contribution of that specific use to community environment or to community development goals in addition to wealth maximization of individual property owners. Also implied is that the determination of highest and best use results from the appraisers judgement and analytical skill, i.e., that the determined from analysis represents an opinion, not a fact to be found. In appraisal practice, the concept of highest and best use represents the premise upon which value is based. In the context of most probable selling price (market value) another appropriate term to reflect highest and best use would be most probable use. In the context of investment value an alternative term would be most profitable use."

Real Estate Appraisal Terminology, Edited by Byrl H. Boyce, Ph.D. SRPA, Ballinger Publishing Co., Cambridge, Mass. 1975

- F. The purchase of a piece of real estate today involves the acceptance of a great many assumptions about the future. Those who take care to validate these assumptions in a period of transition as to public land use control tend to have the most successful investment.
1. Business decisions today make explicit recognition of their assumptions and the need to act under conditions of uncertainty.
 2. Business risk is the difference between assumptions about the future and realizations, the proforma budget and the end of the year income statement.
 3. Risk management is the control of variance between key assumptions and realizations.
 4. An appraisal is a set of assumptions about the future productivity of a property under conditions of uncertainty.
- G. The concept of highest and best use of land was a commodity concept which did not consider externalities adequately. It is being replaced by concepts of most fitting use and the concept of most probable use.
1. The most fitting use is that use which is the optimal reconciliation of effective consumer demand, the cost of production, and the fiscal and environmental impact on third parties.
 2. Reconciliation involves financial impact analysis on "who pays" and "who benefits" - thus the rash of debate on how to do impact studies.

3. The most probable use will be something less than the most fitting use depending on topical constraints imposed by current political factors, the state of real estate technology, and short term solvency pressures on consumer, producer, or public agency.
 4. Most probable use means that an appraisal is first a feasibility study of alternative uses for a site in search of a user, an investor, and in need of public consent.
- H. Ratcliff agrees that the concept of highest and best use is obsolete, stating on page 69:
- "There seems to be little doubt that most investors optimize or satisfy and that few of them rely on the single classical criteria of maximizing net income. To the extent that this is true, the 'highest and best use' determined by maximization of net income is an unrealistic concept because it does not reflect actual human behavior. Actual decisions are complex but the primary skill of the appraiser is to predict human behavior in terms of the probable outcome. The 'highest and best use' thus becomes the 'most probable use' and the prediction of market behavior in general, for whatever purpose, must be founded on the manner in which real people arrive at decisions rather than the unreal assumption of the single maximization test."
- I. In seeking the most fitting and most probable use, the inner city planner and private property appraiser must interact to determine how community objectives and consumer-production sector solvency can be achieved simultaneously.
 1. A real estate decision has only two basic forms. Either a site is in search of a use and consumer with the ability to pay, or a consumer, need or use with a defined ability to pay is seeking some combination of space-time attributes he can afford.
 2. The individual consumer with needs and a budget is the drive wheel.
 3. The public sector represents the community owned consumer service delivery system, seeking to minimize marginal cost to the consumer and average cost to the community at large.
 4. The production sector responds to a derivative demand for engineering and management expertise.
 - J. Critiquing the form and adequacy of a real estate solution is analogous to the artistic concept of judging the success of an art object by relating form of the solution to the context to which it was created.
 1. Context includes those elements which are fixed, given, or objectives and to which any solution must adapt.
 2. Form giving elements are those variables within the artists control, i.e. options or alternatives at a particular time.
 3. A solution is judged for its correctness or success in terms of the degree of fit of the form proposed to the context.
 4. Feasibility analysis is concerned with the degree of fit or the extent of misfit between a proposed course of action and the context within which it must operate or fit.
 5. Success therefore depends on how appropriately the problem is defined; testing feasibility depends primarily upon accurate and comprehensive definition of the context.

II. What Does Feasibility Mean?

- A. The concept of feasibility is elusive and much abused. Combining the systems concept of enterprise under conditions of uncertainty and the physical design concept of fit leads to the following definition:

"A real estate project is "feasible" when the real estate analyst determines that there is a reasonable likelihood of satisfying explicit objectives when a selected course of action is tested for fit to a context of specific constraints and limited resources."

- B. The problem of defining objectives and measuring success depends almost entirely on correctly defining the problem and values of the client. The majority of enterprises are not solely interested in rate of return on investment or lowest cost. Most decisions must fit a combination of success "measures" with each decision maker weighting the overall importance of each item differently. Examples of such measures would be:

1. A check list of physical attributes.
2. A check list of critical linkage attributes.
3. A check list of dynamic behavioral attributes.
4. A check list of attributes or services (given weighted point scores).
5. Financial ratios measuring risk, such as cash break-even, rate of capital recapture, loan ratios or sensitivity to specified contingencies.
6. Probability distributions of alternative outcomes and standard error of the estimate.
7. Psychological gratifications.
8. Specified legal attributes.
9. Measures of impact on environment.

- C. The definition also implies uncertainty - a reasonable likelihood of succeeding. That statement is deliberately short of a statistical probability statement. However, analytical judgements can produce some verbal probability statements (that horse is a nag while the black stallion is an odds on favorite) so that the measures of success should lend themselves to explicit recognition of the degree of uncertainty with which success might be achieved.

- D. The general theory of the management process for any enterprise can be converted to real estate semantics for feasibility: (see Exhibit 2)

Values, objectives, policy
Search for opportunity alternatives
Selection of an opportunity

Program to capture opportunity

Construction of program
Operation of program
Monitoring and feedback

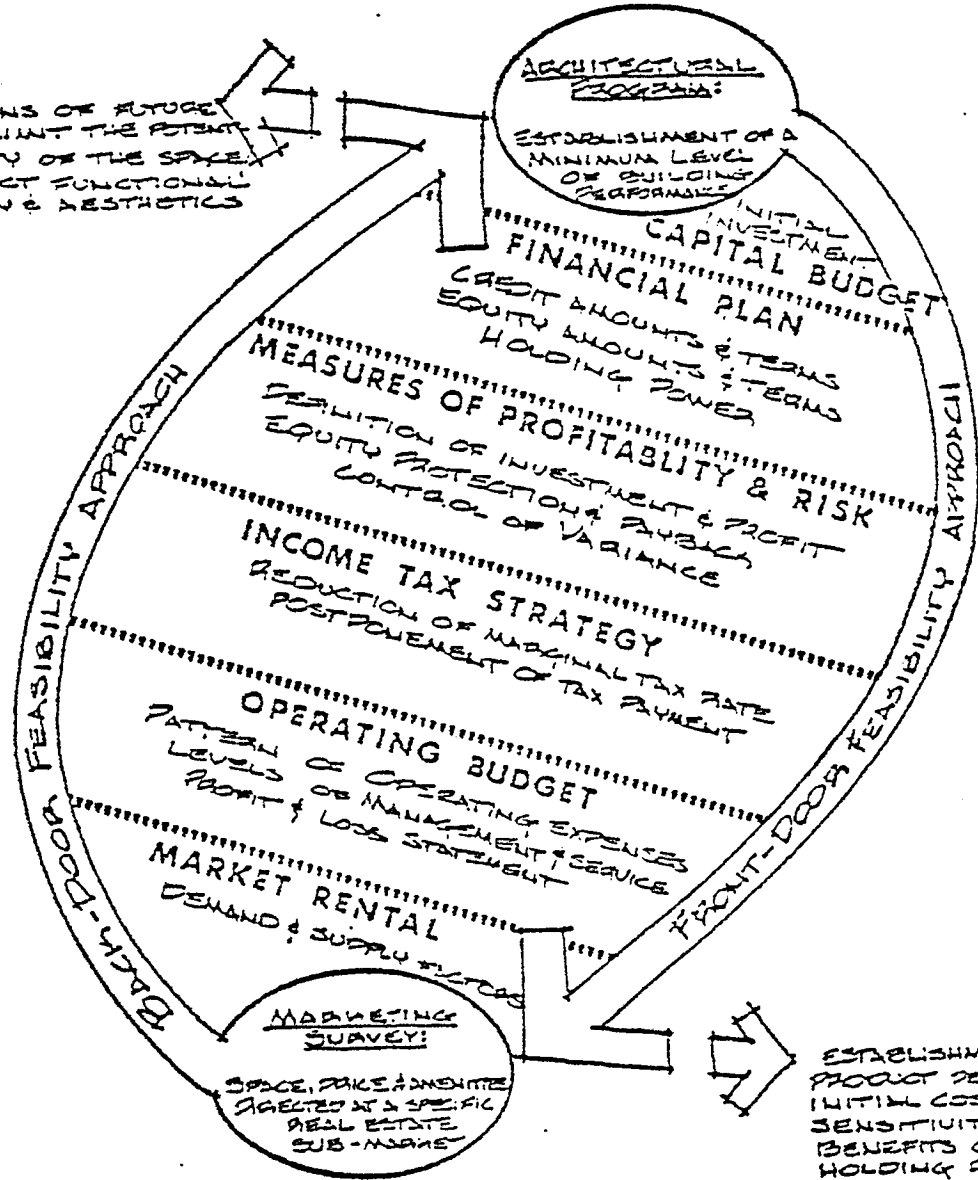
Strategic format
Market trend analysis
Merchandising target with monopoly character
Legal-political constraints
Ethical-aesthetic constraints
Physical-technical constraints
Financial constraints
Project development
Property management
Real estate research

- E. The analyst must also identify and measure or define the limited resources of the client in terms of personnel, expertise, available cash resources, and the time line of expectations and commitment since time available to achieve the solution is often a critical resource and constraint relative to alternative choices.
- F. These basic elements and definitions then lead to a correct title for the report required. Most feasibility reports go wrong on the title page because the analyst did not clearly understand to which elements of context and form his report was to be addressed. Seldom does the analyst do a complete feasibility study as a single report on his own. Components may be provided by others and the sequence of sets may differ in each case depending on how the consultant understands the client. Therefore, a report should be entitled as one of the following:
1. Strategy study: selection of objectives, tactics, and decision criteria.
 2. Market analysis: economic base studies or other related aggregate data review.
 3. Merchandising studies: consumer surveys, competitive property analysis, marketability evaluation, etc.
 4. Legal studies: opinion on potential legal constraints, model contracts or forms of organization, and political briefs.
 5. Compatability studies of project to community planning, conservation standards, or other public policies.
 6. Engineering, land planning, and architectural studies.
 7. Financial studies: economic modeling, capital budgets, present value and discounted cash flow forecasts, rate of return analysis, financial packages.
- G. What is the relationship of feasibility analysis to appraisal? An appraisal report like a feasibility report is a model of a decision process. In fact, an appraisal report is a sharply qualified (fictitious) feasibility study of a site in search of a market. The key differences are what question each model attempts to answer and who asked the question.
1. The appraiser locks himself to a model when he states the purpose of the appraisal is to determine market value on a given date. The appraiser assumes the viewpoint of a prudent economic man using the traditional three economic approaches to value with the objective of maximizing economic surplus of a single parcel real estate enterprise.
 2. What if value is not the central question? What if economic surplus is 0, but profit centers above the net income line are positive? What if motivations are personal, subjective, or in a broader portfolio viewpoint than offered by a single parcel?
 3. The feasibility analyst sees the project from the viewpoint of a particular client with unique objectives; the appraiser works with an undefined, generalized economic man; more recently a profilled group called "most probable buyer."

EXHIBIT 2

SPACE PRODUCER

EXPECTATIONS OF FUTURE BENEFITS LIMIT THE POTENTIAL QUALITY OF THE SPACE. TIME, PRODUCT, FUNCTIONAL, EFFICIENCY & AESTHETICS



ESTABLISHMENT OF SPACE PRODUCT RESULTS IN HIGH INITIAL COST BUT LITTLE SENSITIVITY TO FUTURE BENEFITS OR LENGTH OF HOLDING PERIOD

SPACE CONSUMER

TWO SIDES OF THE COIN

CONTEMPORARY REAL ESTATE APPRAISAL SEMINAR

SECOND EVENING

7:00-9:00 p.m.

Concept of Most Probable Buyer Type/Most Probable Price

- I. Ratcliff Theory would place as much emphasis on behavior of prospective buyers or investors as on the operating behavior and characteristics of a property. Appraisal is trying to predict how people, buyer and seller, will behave in the future, converting a decision to a mutually acceptable price.
 - A. Each party is operating under certain assumptions and constraints:
 1. Buyers assume they will have to pay no less than some specific price, that others are bidding for the property, that they cannot afford to pay more than a certain amount of income for shelter or business location, or that a desired use requires a specific set of attributes.
 2. Sellers assume buyers see the property in the same way they do, that the property has some inherent value and utility, and that its just a matter of time before some fish can be found to pay the asking price.
 - B. The definition of value selected by the appraiser also assumes certain motivations for buyer and seller which typically are a matter of convenience for the appraiser but often a significant source of error in the prediction of price. While the wording on fair market value differs slightly, the following conditions are always assumed to prevail:
 1. Competitive market conditions.
 2. An informed buyer and seller.
 3. No undue pressure on either party.
 4. "Rational" or prudent economic behavior by both buyer and seller.
 5. A reasonable turnover period.
 6. Payment consistent with the standards of behavior of the market.
 7. Market Value looks at the transaction from the point of view of the buyer.
 - C. However, a buyer is integrating and comparing a property more to a personal set of needs than to a property alternative which is only roughly similar to another in function and potential.
 1. For example, a commercial office building developer seeks a site with a minimum number of construction problems, an optimum shape, and maximum rental value. On the other hand, the committee buying a home office site for an insurance company or bank will emphasize visibility and location at the expense of almost any development cost and despite any reduction in rental value for re-use.
 2. A young couple may buy an old house because it is run down and in need of renovation in order that the initial cost is low and the opportunity for creating equity is greatest, while the seller is selling because of irritation with the fit of the structure to his lifestyle or because he has reached the end of his lifécycle in that location.

3. One man's floor is another man's ceiling.
 4. Therefore, the eventual sales price at which two parties will agree is arranged within a zone of expectations and requirements reflecting the assumptions of each party. Indeed some transactions are designed so that the final price is determined later based on whose assumptions prove to be more correct in a speculative situation.
- D. Both buyer and seller enter negotiations with a subjective value expectation (V_s) which is a constraint in bargaining for the property.
1. "The actual selling price will usually represent a compromise between what the buyer would have paid if necessary and what the seller would have taken as a last resort." p. 13, Ratcliff.
 2. Therefore, the appraisal must take more than just the buyer viewpoint of the transaction or the appraisal will not be of a value that reaches the minimum the seller can or would accept.
- E. This leads then to the concept of a transaction zone around a point which is the central tendency of bargaining, a point we call most probable price. Notice the assumptions of most probable price may be somewhat more acceptable in terms of pragmatic realism than those of fair market value.
1. Subjective value (V_s) is a figure with which buyers and sellers enter the market as a constraint in the bargaining. The actual selling price will represent a compromise between what the buyer would have paid if necessary and what the seller would have taken as a last resort.
 2. In residential work, where there are many sales, the transaction zone may be defined statistically as the standard deviation of the estimate.
 3. The possible variance or error in the estimate of probable sales price may be intuitive by the appraiser.
 4. The zone may be defined by the logic of bargaining positions. The seller wants to cover his debt and broker fees; the buyer assumes a certain value in a new use less remodeling costs, less a cushion for unexpected costs and profit.
 5. In the cast of investment properties, sensitivity analysis may define the range of alternative outcomes.
 6. There may be certain conditions which cannot be known by the appraiser but which would change his estimate as to what the buyer or seller would accept; the appraiser may define the transaction zone as the range between optimistic and pessimistic impacts of external events.
- F. The important function of the transaction zone is to alert the reader of the report:
1. To the fact that an appraisal value is not a certainty but a prediction of a future hypothetical business event.
 2. Present value is the purchase of a set of assumptions about the future and therefore value depends on which set of assumptions the buyer and seller "buy."
 3. The reliability of a prediction is important in using probable price as a benchmark for a decision; reliability is less important in assessment than in investment, conservatism more important. in lending than in equity investment, etc.

II. The Two Basic Methods of Appraisal

As you know, Ratcliff concludes that most appraisals are concerned with prediction of a future event, a transaction price. Since an appraisal method is a forecasting tool, forecasting is best done with some past experience. Failing that, the best method is simulation of the real estate market process.

A. Given reliable information on past market behavior, the preferred method of appraisal is to process the data, statistically if possible, to derive a prediction of future price behavior under given conditions and with means for estimating the reliability of the prediction.

1. Statistical prediction if possible.
2. Statistical rules for definition of a data set at the least.

B. Should market data be unavailable or inconclusive, the appraiser is forced to resort to the second method of appraisal, namely the construction of a real estate market model of factors which reflect his understanding of how buyers and sellers might behave.

1. The income approach and the cost approach are submodels of how an investor is supposed to behave.
2. After tax investment models are another submodel of market behavior, but while these may measure demand from the buyer's viewpoint, it may not measure the minimum price expected by the seller who also has a tax model to consider. In using the second approach, the appraiser must be very careful to indicate price on the supply side representing minimum expectations (V_s) of the seller.