

JAMES A. GRAASKAMP COLLECTION OF TEACHING MATERIALS

V. INDUSTRY SEMINARS AND SPEECHES - SHORT TERM

F. Miscellaneous Professional Associations

21. "Feasibility Analysis-the Father of Appraisal", Lambda Alpha Presentation, March 19, 1976; includes both the outline and transcriptions of the talk

Outline

Lambda Alpha Presentation Feasibility Analysis - The Father of Appraisal

Friday, March 19, 1976

I. Introduction

- A. Scholars, gentlemen, ladies...and mortgage bankers
- B. Appreciation for \$500 grant which began cash flow modeling at the U. of Wis.
- C. Typical professor - attendance is lousy unless he is promised the opportunity to dominate the conversation.

II. The topic title was suggested by the Chicago statesman - Larry Cleland who thought "Feasibility, the Father of Appraisal" had a loftier and more academic tone than my suggestion ' "Appraisal, a Bastardized offspring of Feasibility" whose maternal lineage walked the streets of the financial district during the depression.

- A. By way of setting up an "I told you so" at the U. of Wis. we have been building our program on a number of basic definitions or axioms:
 - 1. Real estate is artificially delineated units of space-time
 - 2. A real estate enterprise is any systematic conversion of space-time to money-time or vice versa by a cash cycle enterprise that includes consumers of space-time, the public infrastructure on which real estate depends, and the private sector of space production management.
 - 3. A cash cycle enterprise depends on a forecast of assumptions about future receipts and outlays.
 - 4. All forecasts are subject to error and risk, both business and philanthropic is the variance between proforma expectations and historical accounting realizations.
 - 5. Enterprise management involves assumptions of a scenario and then control of variance and the execution of the program. The primary control on variance is expertise - entrepreneurial skill.
 - 6. Therefore, the real estate business is essentially a service industry providing expertise in the management of cash cycle enterprises in the conversion of space-time to money-time. In the private sector or the public sector all the profit centers lie in the delivery of services.
 - 7. A real estate project like a shopping center or an office building is attractive to private enterprises because each project is a captive buyer of services and can be profitable to the promoter even though the net income, or traditionally economic surplus is close to 0 if the developer is successful in laying off the cost of unexpected variance on others.

8. Therefore, it follows that cash flows, monthly payments, loan disbursements, etc. are real and values are subjected, and value is not the central issue of urban land economics.

B. The real estate process involves the interaction of space-users, space producers, and the public infrastructure, all of which are cash cycle enterprises which must remain solvent. No one can force any of the other sectors to operate at a negative cash flow without putting the whole system into a self destruct process ala the City of New York. Like the great forces of air masses from the north and south, etc. which interact over Chicago producers and the consumers and the public infrastructure find equilibrium over a given piece of land. The land itself imposes certain constraints on an equilibrium solution.

1. The important point to remember is that cash flow equilibrium among the three factors is more important than profit maximization for any one of these factors.

2. The ecco system in land is not constrained by survey boundaries or political district lines so that impact must be concerned with the total context of a given site.

C. All one purchases in a real estate transaction are a set of assumptions; that immediately and explicitly recognizes a degree of uncertainty about the future results and the management of financial uncertainty is the field of risk management, of feasibility, and thus as we shall see, the presentation of appraisal opinion.

III. Now consider the terminology books definition of feasibility which is verbatim from our feasibility guide:

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

A. Notice the implications of probability, a specific site or project and specific assumptions as to constraints and limitations.

B. A project is feasible only after the criteria of satisfaction have been defined. Any decision requires identification of alternative courses of action with alternative outcomes, a statement of values reduced to objectives and criteria, and then a set of screens applied to alternative courses of action to see which is most likely to produce a satisfactory outcome.

C. There are three feasibility situations:

1. Site in search of a market
2. A market in search of a site
3. An investor in search of a real estate opportunity

4 APPRAISAL AS A FICTIONAL SET OF FEASIBILITY ASSUMPTIONS

<u>Feasibility Analysis</u>	<u>Appraisal Analysis</u>
Will the project really work for a specific investor?	What would the project sell for if it did work for a typical investor?
1. Objectives - decision standards provided by client decision process a. Maximize spendable cash of total enterprise b. Subjective gratification of specific individual c. Adaptation to enterprise management specialties and weaknesses	1. Objectives - decision standards provided by theoretical framework a. Maximize economic surplus of individual parcel b. Prudent behavior of economic man c. Average management to isolate return to land & capital
2. Aggregate market potential opportunity identification	2. Aggregate market potential business climate
3. Merchandising analysis (defining competitive edge) and specific user profile	3. Merchandising comparison (defining standard competitive substitute)
4. Legal-political context a. All legal constraints on site, seller, buyer, and user are considered b. What is legal is qualified by what is political	4. Legal-political context a. Fee simple assumed b. Limited to site use rather than regulations on probable user
5. Physical-technical constraints are examined in terms of what might be	5. Physical-technical constraints are studied as is by visual inspection
6. Impact on environment and community specifically forecast	6. Impact on environment and community assumed acceptable within existing permitted uses
7. Financing from buyer viewpoint considering all profit centers	7. Financing from lender viewpoint considering only net income line and below
8. Income tax advantages or disadvantages affecting spendable cash	8. Income tax not considered except implicitly recognized in market comparison
9. Actual cash revenues and expenses forecasted for each period of time horizon	9. Revenues and expenses generally normalized and projected on linear trend for standard period
10. Limiting assumptions of solution a. Identification of potential variance and sensitivity of objectives to alternative outcomes b. Responsibility allocated among sources of expertise c. Budget & purpose of study explicitly edits information scope	10. Limiting assumptions of solution a. Single number conclusion without qualification as to alternative outcomes b. Responsibility denied for other areas of expertise c. Date of appraisal implicitly edits information scope

- IV. It can be seen that an appraisal report relies on a standard model of economic man and a set of limiting assumptions which permit the appraiser to operate as a generalist and as a loner. The feasibility analyst is a generalist in his ability to perceive unanswered questions or critical assumptions but feasibility confirmation will depend on a team of specialists.
- A. An initial feasibility study defines the parameters within which a project could work and many lenders to their sorrow have confused that with feasibility confirmation in which the specialists establish that it will work.
 - B. Ratcliff and others are suggesting that appraisal methodology be more explicit in recognizing that it is a thought process that first depends on establishing feasibility of a site or building in search of a market and then attempts to determine what that feasible use would sell for.
 - C. Site attributes in search of a market suggest alternative uses.
 - 1. Alternative uses are culled by market conditions indicating which uses would be most profitable as of the date of the appraisal.
 - 2. The most probable use suggests the most probable buyer group
 - 3. The appraiser then attempts to forecast what the most probable buyer would pay by inference from past transactions or failing that, simulation of economic logic.
 - D. This contemporary approach to appraisal is easier to write and to understand as the site in search of a market leads to a natural inductive form of presentation:
 - 1. The problem
 - 2. The definition of value most relevant to the problem
 - 3. The site attributes, (static, legal, linkage, and dynamic)
 - 4. The most probable use
 - 5. The most probable buyer
 - 6. The initial appraisal estimate
 - 7. External conditions not present in past sales or accounted for by simulation
 - 8. The final value conclusion
 - E. The appraisal process is a model and like all models it should be judged on six elements.
 - 1. What is the question?
 - 2. What is the data?
 - 3. What is the logic that focuses data on the question?
 - 4. What are the abilities of the analyst?
 - 5. How does one communicate with credibility to the client?
 - 6. What is the cost benefit ratio of the method?
 - F. Appraisal methodology must give more explicit recognition that assumptions of sale at a given price depend primarily on first solving the feasibility question and present appraisals fail to meet that test.

The Speech

ADDRESS BY DR. JAMES A. GRASSKAMP TO A MEETING OF LAMBDA ALPHA ON MARCH 19, 1976

I would like to, first of all, greet my new brothers, scholars, gentlemen, ladies, and my friends -- the mortgage bankers. It is indeed a pleasure to be here. Lambda Alpha, perhaps did not know it at the time, but they started me on my way. They had given Dick Ratcliff a \$500 grant to finance some research at the University of Wisconsin and he squandered that on some of our computer programs. The initial cash-flow program that we used up at the University was developed with your money. I suspect I am still the typical professor, my attendance is probably the worst of any member of Lambda Alpha unless, of course, you invite me to speak -- I am only too happy to be here.

The topic for today was suggested by Chicago statesman, Larry Cleland, a gentleman in every manner of the term; he suggested "Feasibility, the Father of Appraisal". Actually, what I had suggested was, "Appraisal, the Bastardized Offspring of Feasibility". He decided that was not quite in keeping, but I did point out that the maternal lineage of appraisal together with feasibility had walked the streets of the financial district of Chicago during the depression and so was quite appropriate that we begin to explore that topic here. Perhaps a little further by way of "I told you so", the University of Wisconsin is delighted to be a member of the Ely Chapter. Northwestern University has always been one of our mission schools down here in the land south of the border.

What I would like to do is establish a little bit of what we are talking about in terms of our basic concepts of the rules of education at the University of Wisconsin because, in fact, it does lay the ground work for the relationship between feasibility and appraisal. First of all, we define real estate at the University of Wisconsin as simply "artificially delineated space with a dimension of time -- it is a four-dimensional product." Space-time is the product. We always talk about a room for the night, an apartment by the month, an office by the year. You talk about Colosseums in terms of event days, you talk about tennis courts in terms of court hours, ice-skating rinks in terms of ice hours. We are always defining it as a three-dimensional item with a fourth dimension in time. Real estate is artificially delineated space-time. A real estate enterprise is any systematic conversion of space-time to money-time; or conversely, money-time into space-time. The homeowner is converting his money, monthly payments, etc., to command a space-time unit, be it an apartment, or whatever. Now, that means that in fact, we have a variety of real estate enterprises. The consumer of space is a real estate enterprise. So is the purveyor of the public infrastructure services. And so, of course, is the entire production segment in the private sector. All of these enterprises have one thing in common -- they are cash-cycle enterprises. Now, if we had just a little push cart, we could go down Mission Row in the mornings and buy the necessary pansies and posies which would be our inventory for the day. If for some reason things do not go well, we can either change our price of pansies relative to posies, we can change the location of the push cart, we can sell bouquets; and, by the end of the day, we will recover our capital and hopefully the price of a meal. And, if it is raining the next day, we can say the hell with it altogether. If we are talking about a retail enterprise, it takes several months to make the turnaround. In an industrial enterprise, perhaps several years to make that turnaround in its location, its product mix, its pricing, etc. Real estate is unique among cash-cycle enterprises. It would take twenty-five years to make that turnaround at the very least; and we are still left with a building which has, perhaps, seventy-five years to run; we cannot change the location of that push cart in terms of what corner it is located on and it is almost impossible to change the product mix from the time we initially build it.

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Cash-cycle enterprises begin with money in the bank, they move into raw materials, goods-in-process, finished inventory, accounts receivable and back into cash again. Only a minority of enterprises are intended to be profit-making enterprises. Most of them are designed hopefully to be at break-even and we are having trouble making government even operate at break-even. The school system, a sewer line, garbage collection service, police service as well as an apartment building are all cash-cycle operations; they all have one basic criterion: they must all operate at cash break-even in any one form. Making a cash-cycle forecast over long periods of time is subject to a great deal of error. Therefore, most of the expertise in the management of cash-cycle enterprises is intended to control variance: variance between the assumptions and the realization, between the proforma budget and actual historical accounting record of one we, in fact, have accomplished.

In modern financial management today, the control of variance is defined as risk management. Most of what you do in the real estate enterprise is risk management. We teach our real estate finance course as a course in risk management. All the tools of a risk manager are available in real estate today from the hedge of the new Chicago Board of Trade futures market, to GNMA certificates, to the basic mortgage itself which, with an exculpatory clause, is nothing but a straddle, in other words, it is a "call" on the future success of the project and it is a "put" to the lender if in fact it does not work. And the mortgage people have just suddenly learned about "puts" in the mortgage market.

Enterprise management therefore, involves a set of assumptions about a future scenario. Then we attempt, of course, to control the future so that it runs out according to that scenario that we hypothesized at the beginning. The primary control on the degree of variance is entrepreneurial skill. That variance which is due to those static risks, those things which could only cause a loss and which are beyond our ability to prevent or forecast, of course, can be typically laid off by insurance: fire, life, accident, etc. But the entrepreneurial risks are the ones, of course, that are critical to the project. It has always amazed me that the lender requires, up front, on the down-stroke, maybe 3% of the capital value of the project for insurance in case it should burn down because they feel that their collateral is threatened, but they will not require the borrower to spend 1% to find out if it will rent up. And, yet it is that risk-management element which is, of course, the true collateral for the loan..

The real estate business is essentially a service industry which happens to involve a big chunk of hardware. Because, it is really the management of all of the components of the cash-cycle enterprise which converts space-time to money-time and that is a reversible equation. All of the profit centers in real estate are in the outlays. The outlay to purchase the land, the outlay to purchase the contractor's services, the outlay to provide property management services, mortgage banking services, legal services, architectural services, etc. The economist assumes that the economic product of real estate is in the net income line, but almost all of the profit centers are above the net income line. The ability to control a real estate enterprise is the ability to control a captive buyer of services. The real estate industry purveys services to captive buyers called building projects. It changes the ball game. A real estate project, therefore, is only attractive to the degree it represents, really, an outlet for services. Therefore, it follows, that value is not the central issue.

Although it is hypothesized that value is the central issue in land economics, we believe that cash flow is the central issue and, therefore, that is the way we teach real estate. Value is whatever you choose to use as a discount approach on cash flow. That may be entirely subjective; that may be entirely unique to the position of one party or another. The real estate process has to be distinguished from the real estate business. Real estate process involves the interaction of space users, space producers and the public infrastructure: all of which are cash-cycle enterprises; all of which must remain solvent; all of which are interdependent. No one of those three parties can force the other to operate at less than break-even without proceeding on a self-destruct course for all three. The City of New York is the classic example of this. If you can build a World Trade Center which does not pay real estate taxes which drains out the tenants of those who do, that throws the burden of providing the services on the City without a commensurate return, and ultimately you are on a self-destruct course. Public infrastructures, the consumer and the production sector must operate in cash break-even and must find ways to do so or it is on a self-destruct basis. It is not a process of confrontation; it is a process of synthesis.

The land, itself, we treat as a basic finite natural resource. It imposes a constraint on what all three parties may do, and, of course, it is the ultimate constraint of survival. It is the eco-system on which all others depend. So real estate has always been in a position of attempting to ameliorate the discomfort, the anxiety, the inconvenience that man has always found in adapting to the land. It has been ever thus. Real estate began when somebody rolled a rock in front of a cave and by so doing, delineated that void from the natural void around it by creating the attribute that it was exclusive, it was more defensible, it was warmer, whatever. That was the beginning of real estate. Perhaps in those days they occupied it by the moon, and today we have a lease for years; but, nevertheless, we are still talking about a space-product for time. But the land is not constrained by survey boundaries; the land is not constrained by political district lines. Impact, therefore, must be concerned with the total context of the site. The confrontation of producer to consumer, the public infrastructure, occurs simply over the land. The storm continues much like the weather elements fighting over Chicago as the warmth and winds from the south and the north Canadian air battle then produce whatever confrontation may occur simply over a particular point on the surface of the globe.

The land itself, and even, and here is heresy, the success of the real estate industry does not depend upon the private ownership of land; it depends upon the delivery of professional expertise. The profits that are made in land most often are made as the result of externalizing the true cost and forcing someone else to pay the bill. All one buys in real estate scenario is a set of assumptions about the future. Real estate is the softest commodity in the world because, for success, the assumptions must go over the longest possible period of time. And yet, of course, the longer the period of time, the more intervening circumstances there are, which will in fact perhaps make impossible the initial objectives of the investor.

As soon as we recognize that all you buy in real estate is a set of assumptions you are on your way, of course, to exclusively recognizing that there is a degree of uncertainty about all of your conclusions about the real estate. This element of uncertainty or variance is the subject of risk management. It is also the subject

of feasibility. Therefore, as we shall see in a moment, it has a profound impact on what it is we should be doing with our appraisal.

All of this is by way of introduction to alerting you to a very subtle change which occurred in your own basic terminology handbook, the one that was just recently put out by Byrl Boyce from the University of Connecticut, in which the definition of highest and best use was significantly and profoundly changed. Although in Connecticut they are afraid to come out and say so directly and, knowing Bill and Byrl very well, they hide that change in a much longer definition. The old definition is about 2½ inches long in your terminology handbook. The new definition is about 6 inches long, but has some rather significant phrases. It used to say, "Highest and best use as a valuation concept normally means the use of a parcel of land without any regard to improvement on it that will maximize the owner's wealth by being the most profitable use of the land." That was in 1971. In 1976 -- "Highest and best use, that reasonable and probable use that will support highest present value as of the effective date of the appraisal. Alternatively, that use from among reasonably probable and legal and attractive uses found to be physically possible, appropriately supported, feasible and which results in the highest value within those constraints." The definition above "immediately applies", it says, "to the highest and best use of land." Implied within these definitions is recognition of the contribution of that specific use, the community environment and the community development in addition and at the expense of wealth maximization of individual property owners. Also implied in that determination of highest and best use results in the appraiser's judgment and skill determined from analysis represents an opinion and not a fact." Old bankers who buy appraisals as if they were fact had better read them again. "In appraisal practice the concept of highest and best use represents a premise upon which value is based. In the context of most probable selling price the term which reflects highest and best use would be called most probable use and in that context of investment value it would be most profitable use. In short, it is the profitable use of those alternatives left to the private option." Now, that drastically alters the ball game against your traditional concepts.

Now, consider what we have been teaching and which is now in the terminology book as well as the definition of feasibility. "The real estate project is feasible when the real estate analyst determines there is a reasonable likelihood of satisfying explicit objectives when a selected course of action is tested for fit into a context of specific constraints and limited resources." Notice first of all that there is an implication of probability; it says a "likelihood". Now we have not reached the point where we can talk about mathematical probabilities, but we can verbalize probabilities and talk about a nag versus a frontrunner. Second of all, notice it says "of satisfying explicit objectives". That means, first of all, we have to know from whose viewpoint is it feasible. We have to have a viewpoint. And we have to have some idea or some profile of that viewpoint in terms of its abilities, in terms of its finances, in terms of its objectives before we can judge whether something will succeed or not. Furthermore, it says "when a selected course of action is tested for fit to a context of specific constraints and limited resources." The constraints, of course, may be imposed by the character of the site, by the character of the politics within which that site will operate--it may be enforced by the nature of the user itself and the limited resources may be money but more often today is talent.

A project is feasible only after some special definitions have been provided. In short, you cannot answer a question until you have the question right. Now, think about it for a moment, any decision requires that you first identify from a whole series of informational inputs alternative courses of action and then what are the consequences of each of those alternatives. At the same time you convert values to objectives and standards. A value is a moralistic judgment -- to make a profit is good. The objective is make 10% on my money. But it is still not operational until you define what is a return. Is it cash-on-cash? Is it, in fact, including the profit centers from my related operations? Does it include the tax shelters? Does it include a variety of other types of returns? And of course, then, what is my money? Is it the money I have on the down-stroke or the money I have yet to recover or it is the money I can sell it for by liquidating? We cannot answer the question of "What is ten percent on my money?", until we have a specific sort of criteria. These criteria then become the screens by which we evaluate the consequences of alternative courses of action and the degree of their acceptability. If that sounds abstract -- Woody Hayes talks like that! Woody Hayes does not pass the ball more often because he says that 'two of the three alternative outcomes are bad.' Now that is only true from his viewpoint.

There are only three feasibility situations: a site in search of a market; a specific site, with improvements perhaps, in search of some use, some need; or, conversely, a well-defined need in search of the most appropriate site with related improvements; and the third situation that you as a counselor will generally have, an investor on the sidelines in search of some way to break into real estate. That is why we organize the new group of Developers' Anonymous and whenever one of our friends has a brilliant new idea for development, we show up at midnight and talk him out of it.

An appraisal report is nothing more, really, than development of a feasibility study around a site in search of a market. The appraiser must always begin with a specific piece of ground, a specific improvement in question -- he cannot appraise in general. As a result, then, an appraiser really begins with a model of how to go about that analysis. For example, if we were to look at the basic comparison of a feasibility report against an appraisal report, we would find that the appraisal begins with a very simple question: "Will the project really work for a specific investment?" The appraisal report begins: "Will the project really work for somebody called the prudent man?" I have not met one yet in real estate but, by definition, he would not be in real estate. What kinds of objectives are we assuming? The feasibility analyst will find that his viewer is trying to maximize spendable cash from all sources as a result of being affiliated with the real estate and maximizing his liquidating net worth. He will want to adapt his real estate to the specific characteristics, weaknesses and advantages of his management team. The appraiser says "no", we are going to maximize "economic surplus". He ignores everything in terms of real estate until he gets to the net income line. There is an awful lot of material which is built today which did not even figure on having a net income line. Now from his viewpoint, as long as he does not have to sign on the mortgage it is a feasible project even if there is no market. From the viewpoint of the lender, however, we shift gears and we want to know what cash is in that project available for the payment of debt service, and that is a different question than economic surplus too. Making a loan is simplicity itself, really. Graaskamp's theory of the pleasure-payment bail out approach to a loan. Their number one security is the continued cash flow to the borrower because then the goose will continue to lay the golden egg and he has a vested interest in making the mortgage payments. And should the cash flow falter a little bit you need sufficient pain to encourage him to move over the thin ice into the future.

Barring sufficient adequacy of pleasure or pain, the next question is really, "What is the next best use of the property now that I own it as the lender?" Any loan has got to have two out of three: If you cannot figure out what the next best use is, you had better build the pain and the pleasure into that loan agreement. If he does not want to take any pain, then you had better be very confident what the next best use is. But you got to have two out of three. Our present crisis in real estate finance is because everybody lost sight of those basic principles. The pleasure was all up-front on the down-stroke. You had your celebration when you closed on your permanent financing because that took you out of the project and gave you your profit, and, if it did anything beyond that point, that was redundant. There was no pain because you didn't have to sign personally and Lord only knew what the lender would do with it if he ended up owning it and since he did not pay his money to find out if it would rent-up, now he is praying that it will burn down.

The basic feasibility study looks at the aggregate market data simply as a way of beginning to identify market opportunities and moves on quickly to this basic merchandizing analysis which is necessary to make real estate stick. Free enterprise is the art of creating your own monopoly, if only for a moment, to view the property within its own parcel boundaries and never look at what anyone else is doing around you, or the supplies that are on the market or the supplies that are in the pipeline. It is to deny that basic principle because you are not going to have a monopoly when you come on stream unless you very carefully define who your customer is and establish a customer profile that gives you the competitive edge -- and here is where feasibility and appraisal part company because appraisers are always looking backward by defining the standard of the competition: What is the average or what is the typical, who was served last time? The new development wants to know who will be served next time? Feasibility is where you have a competitive edge; appraisal is defined by the competitive standards; therefore, to use an appraisal on which to make a loan is obviously a self-destruct route.

Let us look at the legal/political context. The appraiser assumes those away in his limited conditions. He says, if you are allowed to build this, it is going to be a great idea. The feasibility analyst has to know not only whether it is legal but whether the political climate is appropriate -- that, in fact, the administrative arrogance in the enforcement of the law will not kill it. There is no way to be in real estate and be a political innocent and yet the appraiser insists on excluding all of those considerations by simply saying that the permitted use is an appropriate use. This simply is not so.

The physical/technical constraints on the feasibility analyst are such that he must at least ask the questions. The feasibility study defines the parameters within which a project could work. It takes a specialist, not a generalist, to determine whether in fact it will work because there are a great many technical considerations which the generalist/appraiser is not equipped to answer, but he is equipped as a professional to ask. The appraiser takes the position that if I cannot see it with my naked eye, I am not responsible for it. Yet most of what we are dealing with in appraisal, it is that which is intangible, which you cannot see with the naked eye -- from the environment, through the politics, to the market consumer.

The feasibility analyst is very much concerned with the impact on environment because he has to find a project which is financially solvent for the community, the consumer, and the producer. The impact on environment in community is assumed acceptable within the permitted zoning by the appraiser. The financing from the buyer viewpoint on the feasibility study has to look at all of the profit centers which are available to finance the project. The appraiser is still struggling with how he should use the Ellwood ratio on net income, economic surplus. The feasibility analyst must analyze it from the income tax position; the appraiser simply disregards the income tax position except to the degree that it is implicit in the market comparison approach and there he runs afoul because he uses first-owner sales as comparables for second-owner buildings and that does not make any sense at all. The analyst is interested in actual cash, period by period, outlays and receipts; the appraiser talks about something called normalized net because the land economists talk about something called normalized net. Economics and business are two different things. We are talking about a business enterprise, specifically a single building. And, remember, a 24-unit apartment building today is a half-million dollar capital investment. Represently probably something close to a \$100,000 gross a year. That is larger than 50% of all the business enterprises in the United States and yet if someone came in and proposed financing any other kind of enterprise with a 100% loan on \$100,000 gross sales, we would throw him out of the office.

Finally, the limiting conditions for the appraiser are simply (1) to identify where are the biggest assumptions underlying the project and the potential variance that might occur in those assumptions and the consequences therefrom -- sensitivity analysis, (2) allocate responsibility among the various specialties which have been involved in the analysis, and (3) to identify where in the process of analysis and refinement this particular study is -- is this the first one? the preliminary one? is this half-way through? or is confirmation now off the working drawings, etc? And, of course, the budget and purpose of the study very explicitly edits, therefore, the scope of the feasibility study. The appraiser provides a single number conclusion with no indication as to what assumptions are highly sensitive in terms of the number that he has provided. He denies responsibility for all other areas of expertise and uses the date of the appraisal to avoid any liability for any event thereafter.

We are suggesting that an appraisal is simply a fictitious feasibility study in which many of the tough issues have been side-stepped. That is not to say that appraisals are not needed, but is it appropriate to recognize the appraiser as a generalist and his product perhaps establishes the parameters within which a project could work, but it needs confirmation by the specialist in order to determine if it will work. Appraisal is no longer the area for the loner. I see no way in which to do an appraisal today without working with an engineer side-by-side. You have to be the economic interpreter of the engineer's observations of what could be accomplished or what cannot be accomplished or the limiting conditions had better be very explicit in terms of all the areas of expertise which the appraiser has not included in his conclusions and, of course, ultimately the limiting conditions make the final number worthless if they are too broad like a title policy which gives you the coverage on the first page and then excludes everything from the Indians on up to the current day.

Ratcliff and others have suggested restructuring the appraisal process to follow more in line with the inductive process of feasibility rather than the deductive process of appraisal logic. Site attributes in search of a market suggest that that appraisal process would go along something like this: First, you define the problem -- what is the issue to which this appraisal is addressed?, is it to assist someone in purchasing the property?, is it to assist someone in some other aspect of finance relative to the property? Until you define the problem, how do you know what the appropriate definition of value is or what are the appropriate limiting assumptions? Then, notice that as one extra benefit the same appraisal is not necessarily viable for both parties. What it is worth to me as an investor and what it is worth to him as a mortgage lender may be two different numbers. They certainly are different ends of the same range. Second of all, of course you want to know what definition of value we are going to use. Next we need to know what are the site attributes, the static attributes, the physical ones, the legal attributes, the linkage and dynamic attributes having to do with the behavior of the market relative to that particular site. And from that we can determine the most probable use. Once we have said something about the most probable use, we can say something about the most probable buyer. That gives us the necessary viewpoint on which to execute the balance of the appraisal. We can then do an initial appraisal estimate by either viewing what that type of buyer has done in the past in the market and, failing that and less desirably, inferring what he might do because of the economic logic of his position. Now, having either inferred it from the market or simulated it from his viewpoint, we can arrive at an initial appraisal estimate. We then introduce the external conditions -- finance, changes in the market, changes in political climate and so forth which might modify that person's behavior as we viewed it in the past and arrive at a final value conclusion stated as a range. Here is what we feel is the central tendency which is what you used to call "fair market value" and here is the range of error around this depending upon the error in our assumptions.

The appraisal process is nothing but a model, a model of a decision process. Like all models it should relate itself to six basic questions. The first one is, of course, what is the question? We can build a model out of balsa wood that will determine the shape of the fuselage by putting it in a wind tunnel, it does not tell us however to build a jet plane out of balsa wood. Most models answer only one question well at a time. Second of all, we need to know what kind of data is available and, related to that of course, what kind of hypothesis do we have to relate that data to the question. The gross rent multiplier is super if all we know is the price at which it sold and its gross rent. I was talking to one of you here earlier today and there seems to be a high correlation between your gross rent multiple and the sales price of almost all residential projects in the southwest corner which says something about the state of the arts somewhere. But notice, we have to know what the question is before we gather the data and we have to have some idea of the scenario or hypothesis by which we can relate information to the questions. There are three other real constraints -- one of course is what's the ability of the analyst? If all he can do is add and subtract then use the cost approach. If he can do long division, you can do the income approach. Second of all, how do we communicate our results with credibility to the client and more and more the appraisal profession is losing credibility with those who handle the big ticket items. The investment banker is at total loss as to what normalized net income has to do with anything since he has been trained to look at cash flow. If you lose the big ticket items to accountants, engineers and others who do cash-flow programs and you lose the low ticket items to those with the computer doing

mass appraisals, obviously, the area in which you continue to do business is going to shrink if the only question you are prepared to answer is fair market value and fewer and fewer people are asking that question. Finally, of course, what's the best-benefit ratio of using different methods. And that is being altered drastically. There is an explosion of information. The potential for additional information is tremendous. Most of the problem today is that the appraisal profession today does not even know how to have access to that information in terms of air survey, remote sensing, basic information banks which now have geo-codes so that they are spacially organized, all being developed in separate little areas, and in separate little preserves when in fact they represent a public resource. The fact is the cost-benefit ratio is changing drastically and if you put the cost-benefit ratio in terms of risk management, what would market research be worth to the banking firm that is losing a million bucks a day on its portfolio of defaulted non-accruing property. \$500,000 up front would have changed the loss on the other side incredibly.

The appraisal profession, I feel is, in fact, boxing itself into becoming an obsolete profession if the only purpose of its appraisal is to serve regulatory requirements. If the only reason you have an appraisal is to make sure that your loan is 75% of the value but unfortunately the debt service is 110% of the cash flow, it is worthless. Sooner or later the regulators are going to realize that the fault point is a much more universal ratio than loan-to-value ratio and, when that happens, is the appraisal profession prepared to provide reports to support the lending decision or the investment decision? I submit that it is not and until the appraisal becomes more of a feasibility study and until in fact the essence of real estate is better understood not as an issue in value but as an issue in the conversion of space-time to money-time and back again, well beyond the confines of a single parcel of property, the appraisal process itself will become obsolete at a soaring rate.

Thank you very much.